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CONSUMERS' NET WORTH

THE 1953 SAVINGS SURVEY

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I. INTRODUCTION

One measure of the financial resources of the consumer is his net worth, which reflects the net accumulation of capital over a period of years. The amount of capital owned at any time stems partly from savings made in earlier years and partly from capital transfers, the most important of which arise from inheritances. In the Savings Surveys of 1953 and 1954 data were collected which enable estimates of the net worth of income units[1] to be made.[2] An income unit's net worth can be defined simply as the difference between its total assets and total liabilities. In practice the Surveys do not cover every type of asset or liability. With the unimportant exception of money owed by and to the income unit[3] the asset and liability items which were included in the Survey are indicated in Table I.

Life, endowment and industrial insurances, which are taken out by about 70 per cent of all sample income units, were omitted from the Survey definition of net worth because relatively few respondents know the cash value of the policies and because of other problems in insurance valuation ;[4]

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[1] The income unit is defined as : single adult persons aged 18 or over, together with any children dependent upon them ; and married couples with their children, if any. It is worth emphasising that the income unit, although sometimes equivalent to a family as generally understood, is often a much smaller unit.

[2] For a general account of net worth on the basis of the findings of the 1953 and 1954 Savings Surveys, together with a detailed definition of net worth and of the relationship between savings and changes in net worth see : T. P. Hill, Incomes, Savings and Net Worth : The Savings Surveys of 1952–54. BULLETIN, Vol. 17, No. 2, May 1955.

[3] See note 3 to Table I.

[4] An exception is made for endowment policies taken out in conjunction with mortgages.

TABLE I

Components of Net Worth[1]—1953 Survey

Assets[3]	*Mean amount per income unit*[2] (£)	*Mean for those with each asset* (£)	*Liabilities*[3]	*Mean amount per income unit* (£)	*Mean for those with each liability* (£)
Holdings of total liquid assets[4] ...	194	290	Hire purchase debt outstanding	6	27
National Savings	124	235			
Other liquid assets	72	N.A.	Overdrafts on personal bank acct.	6	766
Holdings of stocks, shares and other securities	188	4,436	Mortgage debt outstanding on all property	76	787
Gross value of all property owned...	439	1,980	*Own house*	71	752
Own house	385	1,818	*Other property*	5	N.A.
Other property	54	N.A.			
Value of car(s) owned	24	268			
Value of unincorporated businesses owned	120	2,750			

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[1] Too much importance should not be attached to the absolute amounts. The major components of net worth may have errors of more than 10 per cent in the means.

[2] Because of a process of rounding down adopted to simplify coding and tabulations, certain of these averages may have a small downward bias. The mean value of property may have a downward bias of up to £10, and the means for value of car and stocks and shares may be affected by £2—£3.

[3] Loans made by income units and miscellaneous personal debts were not tabulated separately in the 1953 Survey. They are small in amount. The results of the 1954 Survey indicate that the mean value of loans owed to income units at that time was £7 and the mean amount of miscellaneous personal debts was £2.

[4] National Savings consist of Post Office Savings Bank Deposits ; Trustee Savings Bank Deposits ; National Savings Certificates and Defence Bonds. Other liquid assets consist of : building society shares and deposits ; co-operative society shares and deposits ; joint-stock bank deposits and other savings bank deposits.

discounted expected benefits under pension and superannuation schemes were also omitted.[1] Furniture and other household goods, jewellery, clothing, motor-cycles and bicycles were omitted because of the difficulty of estimating their market value. (However, hire purchase indebtedness incurred through the purchase of such articles is included in debt.) Finally, holdings of actual notes and coin were left out, since it is extremely difficult to collect information about such an item without the risk of antagonising respondents, especially when they have large holdings. The method of valuation employed was that of market valuation, *i.e.* the respondent's estimate of the amount of money which he could get by selling the asset in the open market.

The liabilities covered are mortgage principal outstanding, overdrafts, hire purchase outstanding[2] and other money owed by the income unit, but not short term debts to retailers or others for supplies and services rendered.

Some understatement of the assets covered in the Survey is certain. From data on liquid asset ownership, for instance, it is known that estimates derived from the Survey fall short of national aggregates.[3] It should be emphasised that the exclusion of certain assets from the Survey definition of net worth, and the possible understatement of some of the particular assets included, must result in an underestimate of the personal capital of nearly all income units.

The form of account which was used to calculate the net worth of each income unit is indicated in Table I.

The 1953 Survey data on the distribution of total net worth and its components are analysed in this article according to various consumer characteristics, and thus we are examining an area of consumer finances about which very little is known. The information is presented mainly in terms of proportions or frequencies ; the reliability of such data is probably superior to that of estimates of aggregate amounts. There is reason to believe that the Survey data tend to underestimate the arithmetic means of such highly skewed distributions as liquid assets or stocks and shares, because of the difficulty in a sample of income units of getting adequate representation of the largest holdings.[4] No attempt has been made to round or adjust in any way the mean amounts where they appear in the various tables presented. The figures are shown exactly as they emerged from the statistical processing.

For reasons given elsewhere[5] it is considered that in some respects the 1954 Survey estimates of net worth and its components, and particularly the estimates of the mean amounts, as distinct from the distributions, are more reliable than those of the 1953 Survey used in this present article. Unfortunately no more detailed tabulations and analyses of the 1954 net worth data have as yet been completed than those already published.[5]

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[1] Pure risk insurance, of course, should not be included in net worth.

[2] The estimates of hire purchase outstanding, unlike mortgages, include the interest element, because of the impracticability of separating debt repayment from interest payment for hire purchase.

[3] T. P. Hill, L. R. Klein, and K. H. Straw. The Savings Survey 1953 : Response Rates and Reliability of Data. BULLETIN, Vol. 17, No. 1, Feb. 1955.

[4] BULLETIN, Vol. 17, No. 1, Feb. 1955.

[5] T. P. Hill, Incomes, Savings and Net Worth : The Savings Surveys of 1952–54, BULLETIN, Vol. 17, No. 2, May 1955.

II. Total Net Worth

(1) *Distribution of net worth*

In 1953 most income units in the sample owned assets in excess of their liabilities. Net worth was found to be negative (liabilities in excess of assets) in just over 12 per cent of all income units ; while for 22 per cent of the income units net worth was nothing[1]—Table II. The latter group is made up of those with no assets or liabilities at all, and consists largely of single person income units aged 18–24, usually grown-up children at work but living at home with their parents. The mean net worth for all income units amounted to about £800 ; while the average net worth for those actually having some net worth was about £1,030. The average indebtedness of those income units with negative net worth was about £30.

Table II

Total Net Worth

Net worth group	*Income units*	*Mean net worth for net worth group*	*Proportion of total positive net worth held within each (positive) net worth group*
	%	(£)	%
Negative amount ...	*12.4*	—29.3	—
Nil	*22.2*	0	*0*
£1—49	*17.2*	16.7	*0.4*
£50—99	*6.1*	67.3	*0.5*
£100—199	*7.4*	139.4	*1.3*
£200—399	*6.8*	281.4	*2.4*
£400—599	*3.5*	494.4	*2.2*
£600—999	*4.8*	757.7	*4.7*
£1,000—1,999	*7.1*	1390.3	*12.8*
£2,000—4,999	*7.0*	3000.2	*26.8*
£5,000 and over ...	*2.9*	13123.0	*48.9*
N.A.	*2.7*	—	—
Total	*100*	803	*100*

In Table II are also shown the mean net worth for each of the net worth groups, and the proportion of the total positive net worth held within each (positive) net worth group. About three-quarters of total positive net worth was held by the one-tenth of income units with net worth of £2,000 and over ; while at the very top of the net worth scale almost 50 per cent of positive net worth was held by 3 per cent of income units with net worth of £5,000 and over.

It is important for our present purposes to distinguish between primary and secondary income units. In the former case the head of the income unit is also the head of a household, while the head of a secondary income unit cannot by definition be the head of a household, and to be treated as a separate income unit must have an income of at least £50 per annum. Much the most common type of secondary income unit consists of a grown-up child, working but living at home with his parents ; another much smaller group of secondaries is made up of old people living with relatives.

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[1] Because of the restricted definition of net worth used in the Survey, which covers practically all debt but not all assets, the figures are only partial estimates of personal capital. If value of insurance, furniture, household goods, clothing, etc., and currency holdings had been included in survey estimates, it seems unlikely that true net worth would have been negative in many income units.

Net worth is generally much lower for secondary income units than for primaries, since working children living at home are normally only just at the beginning of their working lives and do not own large assets ; nor are they likely to have incurred large debts. The distribution of primary and secondary income units by net worth group can be seen in Table V.

A close association emerges between net worth and the age of the head of the income unit—Table III.[1] The mean net worth of those income units having some net worth rises through the age scale. As age increases the proportion of income units with net worth of over £1,000 also increases. Income units with a negative amount of net worth were most commonly found between the ages of 25 and 34 ; this presumably is closely associated with the setting up of independent households and the starting of families, when debts, particularly for house purchase and items bought on hire purchase, are often incurred. Thereafter there is a steady decline in the proportion of income units where net worth is negative. Some 42 per cent of the income units in the 18–24 age range had no assets or liabilities.

TABLE III

Net Worth according to Age and Sex

(percentages of income units)

Net worth group	*Age of head of income unit:*						*Sex of head:*	
	18–24	*25–34*	*35–44*	*45–54*	*55–64*	*65 and over*	*Male*	*Female*
Negative amount ...	9.4	21.4	17.3	11.3	8.1	4.6	14.5	6.6
Nil	42.2	14.6	13.6	18.9	19.7	31.7	18.9	31.6
£1—49...	31.7	19.6	16.3	14.2	16.7	10.9	15.5	21.9
£50—99	8.2	10.5	5.8	5.7	6.7	1.5	6.7	4.5
£100—199	4.2	10.9	9.9	4.2	8.1	6.0	7.4	7.5
£200—399	2.3	7.0	8.2	7.9	5.0	7.6	7.7	4.1
£400—599	0.4	2.9	4.6	3.1	3.3	4.9	3.9	2.2
£600—999	1.1	5.1	5.7	6.5	6.3	3.4	4.9	4.7
£1,000—1,999 ...	0.4	4.5	7.8	10.2	4.6	11.4	8.1	4.3
£2,000—4,999 ...	0.1	2.0	5.7	9.8	13.9	9.3	7.1	6.7
£5,000 and over ...	—	0.9	3.0	3.6	4.6	4.4	3.1	2.4
N.A.	—	0.7	2.2	4.7	3.0	4.4	2.4	3.6
Total	100	100	100	100	100	100	100	100
Proportion of income units in each category	10.7	18.0	20.3	17.9	13.2	19.9	73.8	26.2
Mean net worth (£) ...	*38*	*321*	*757*	*1,147*	*1,197*	*1,178*	*861*	*638*
Mean of those with net worth (£)	*66*	*376*	*876*	*1,415*	*1,490*	*1,726*	*1,062*	*933*

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[1] For an account of the influence of the age factor on income, saving and asset ownership see : Harold Lydall, *The Life Cycle in Income, Saving and Asset Ownership*, Econometrica Vol. 23, No. 2, April 1955.

As age increases and the end of the life cycle is approached we find net worth very unevenly distributed. In almost 25 per cent of the income units in the sample in which the head was 65 years of age and over, net worth amounted to over £1,000 ; while nearly one-third of the income units in this age range had zero net worth. The dispersion in this highest age group arises because some people have had a low earning power during their working lives and little opportunity to accumulate wealth ; while others have had the opportunity over a long period to accumulate ; yet others will be in process of running down whatever wealth they possess.

Income units with male heads have a higher average net worth than those with female heads (Table III) and a considerably higher proportion of income units with female heads had no assets or liabilities ; the latter arises partly because proportionately more income units with female heads than with male heads are secondaries. The higher proportion of income units with male heads in which liabilities exceed assets—*i.e.* where net worth is negative —occurs because males are heads of households much more often than females, and will thus have incurred debts for purchases of houses, motor cars and household equipment.

An analysis of net worth by occupation of heads of income units, shown in Table IV, indicates that those income units in which the head was self-employed have much the highest average net worth—£4,600—a figure between five and six times the average net worth of all income units in the

Table IV

Net Worth and Occupation

(percentages of income units)

Net worth group	*Occupation of head of income unit:* Self-employed	*Managers*	*Clerical and sales*	*Skilled*	*Un-skilled*	*Retired and un-occupied*
Negative	3.7	1.2	9.8	17.5	20.9	5.0
Nil	3.7	2.0	18.5	16.9	33.0	34.5
£1—49	0.3	6.3	23.8	21.8	17.3	12.5
£50—99	—	2.1	12.0	7.5	7.8	1.6
£100—199	4.3	10.7	7.5	8.0	7.1	6.2
£200—399	6.6	13.0	6.6	7.5	2.4	7.0
£400—599	2.3	5.8	4.1	3.9	1.2	3.7
£600—999	7.3	10.1	4.3	5.9	1.6	3.8
£1,000—1,999	12.2	14.5	4.4	6.7	4.5	8.0
£2,000—4,999	16.7	19.4	7.3	3.3	2.0	10.2
£5,000 and over	21.8	13.7	0.7	0.4	—	3.7
N.A.	21.1	1.1	1.0	0.8	2.3	3.9
Total	100	100	100	100	100	100
Proportion of income units in each occupation	4.4	7.3	13.9	34.7	17.0	22.8
Mean net worth (£)	*4,404*	*2,572*	*394*	*299*	*159*	*1,199*
Mean of those with net worth (£)	*4,573*	*2,623*	*484*	*360*	*237*	*1,829*

sample. For the self-employed, a substantial investment is frequently necessary to engage in a business undertaking; also their savings tend to be greater than in other groups,[1] in part because there is an incentive to plough earnings back into the business, and in part because of the number with high incomes. The number of cases in this occupational group where net worth was negative or where there were no assets or liabilities was very small ; while in about 50 per cent of income units headed by a self-employed person net worth amounted to over £1,000 and in 22 per cent of the income units to over £5,000. It should be observed that in a little more than one-fifth of the income units where the head was self-employed net worth was not ascertained. This was due almost invariably to the informant's inability to state the value of the business.

The average net worth of income units in which the head was in the managerial category was just over three times the average net worth of all income units. Once again, the proportion of income units where net worth was found to be negative or nil was very small, while in just under half the income units net worth amounted to over £1,000.

The average net worth for the retired and unoccupied group was about £1,830, and was exceeded only by the self-employed and managerial income units. The point made earlier in connection with the uneven distribution of net worth in the 65 and over age group is relevant. Over one-third of the income units in the retired and unoccupied category had no assets or liabilities in our net worth concept, while in some 22 per cent of units in which the head was retired or unoccupied net worth was over £1,000.

The smallest average net worth was reported by wage-earners (skilled and unskilled workers), although this group has a mean gross income about as large as that of the average for all income units. Their smaller resources probably reflect in part the greater proportion of young consumers in this group. For instance, about one-third of the unskilled had no assets or liabilities, and a considerable proportion of these were single person income units consisting of grown-up children living at home with their parents. Also a disproportionately large part of the assets acquired by the skilled and unskilled workers are probably not included in the Survey definition of net worth, *e.g.* industrial assurance policies and household goods.

Net worth is negative in a high proportion of income units with wage earners as the head. Part of the explanation for this appears to be that such income units have relatively larger amounts outstanding for mortgages and hire purchase—subjects to which we shall be giving more detailed attention at a later stage in the article.

A close relationship exists between the housing status of the head of the income unit and net worth. The relevant data collected in the 1953 Survey are set out in Table V. House ownership represents a substantial proportion of total assets, and the average net worth for those income units owning their own house without a mortgage—about 14 per cent of all *primary* income units—is about four times larger than the average for all income units; the net worth of nearly three-quarters of income units owning their own house was over £1,000. Mean net worth for income units owning their houses, but having a mortgage—13 per cent of all *primary* income units—was nearly £1,800, or more than twice the average net worth of all units. Very few of such income units had low levels of net worth, partly no doubt because of the value of the property, but it also indicates, among other things, that the value of the properties is very much above the mortgages outstanding.

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[1] L. R. Klein : Patterns of Savings : The Surveys of 1953 and 1954. BULLETIN, Vol. 17, No. 2, May 1955.

TABLE V

Net Worth and Housing Status

(percentages of income units)

	Housing status of head of income unit:							
Net worth group	*Owns outright*	*Owns with mortgage*	*Rents—Council house*	*Rents—other unfurnished*	*Rents—furnished*	*Rent free*	*All primary I.U.s*	*Secondary income units*
Negative ...	—	0.7	21.9	18.2	13.4	11.2	13.6	8.2
Nil	0.7	0.7	25.3	24.0	16.3	24.0	17.7	37.6
£1—49... ...	—	0.7	26.0	20.1	16.3	10.8	15.3	23.4
£50—99 ...	—	—	8.9	7.4	12.4	10.0	5.9	7.0
£100—199 ...	1.3	1.5	7.1	9.2	20.6	11.2	7.0	8.9
£200—399 ...	3.3	11.1	5.1	8.5	9.1	8.6	7.5	4.3
£400—599 ...	4.0	9.9	2.2	2.8	1.0	8.6	4.0	1.7
£600—999 ...	7.4	14.9	1.3	3.5	7.2	3.0	5.2	3.7
£1,000—1,999	24.1	27.8	0.8	2.1	1.0	1.6	8.3	3.1
£2,000—4,999	32.8	18.5	0.6	2.1	2.9	7.2	8.6	1.4
£5,000 & over	17.0	4.5	0.2	0.9	—	1.2	3.5	0.7
N.A.	9.5	9.6	0.7	1.3	—	2.6	3.5	—
Total	100	100	100	100	100	100	100	100
Proportion of income units in each category ...	11.1	10.0	14.3	37.1	1.4	3.4	77.3	22.7
Mean net worth (£)	*3,890*	*1,778*	*97*	*258*	*256*	*1,977*	*982*	*210*
Mean of those with net worth (£)	*3,916*	*1,792*	*130*	*339*	*306*	*2,601*	*1,194*	*336*

In general, net worth is much lower among income units renting their homes, particularly among council house tenants whose average net worth was £97. A much higher proportion of renters have low—or negative—amounts of net worth than owners, and relatively few renters have net worth of over £1,000. For instance, among those income units renting council houses one quarter had no assets or liabilities, and in over one-fifth liabilities exceeded assets, mainly because of hire-purchase debt.

The small number of income units living in rent-free accommodation have a relatively large net worth—nearly £2,000. Net worth seems to be more evenly distributed among this group, there being a much smaller concentration in net worth groups over £1,000 than in the case of owners, and a smaller proportion in low net worth groups than in the case of renters.

When we examine the relationship between net worth and the number of persons in the income unit we find that mean net worth is substantially greater for the two person income unit, which amounted to 27 per cent of all income units in the sample, than in the other sizes—Table VI. These two person income units consist almost entirely of married couples, either childless or with no children living at home. The proportion of two person income units with negative net worth is relatively low, while nearly 30 per cent of such income units recorded net worth of over £1,000.

TABLE VI

Net Worth and Number of Persons in the Income Unit

(percentages of income units)

Net worth group	*Number of persons in income unit:* 1	2	3	4	5	6 and over
Negative	6.0	8.3	14.8	24.4	25.8	37.7
Nil	34.6	18.2	12.3	10.5	13.0	25.9
£1—49	19.1	11.7	21.2	15.6	23.6	17.0
£50—99	5.3	6.7	7.3	5.6	9.1	2.6
£100—199	8.2	8.2	6.7	8.8	0.8	2.2
£200—399	5.4	9.0	7.8	7.4	2.9	2.2
£400—599	2.2	5.1	4.7	3.7	0.8	2.6
£600—999	4.7	5.4	6.0	3.9	5.1	—
£1,000—1,999	5.0	10.4	7.2	7.4	7.5	2.6
£2,000—4,999	5.3	9.8	7.3	7.7	3.9	2.2
£5,000 and over	1.9	4.8	2.7	2.1	3.4	2.0
N.A.	2.6	2.6	2.1	3.0	4.2	3.0
Total	100	100	100	100	100	100
Proportion of income units in each size group	36.2	27.0	15.7	12.6	5.2	3.4
Mean net worth (£)	*517*	*1,313*	*765*	*672*	*707*	*605*
Mean of those with net worth (£)	*790*	*1,604*	*872*	*750*	*812*	*817*

Single person income units—some 36 per cent of all income units—have the lowest mean net worth, and this is further exemplified by the large proportion of single person income with no assets or liabilities.

Excluding the single person income units, in general net worth tends to decline as the number of persons in the income unit rises ; and closely associated with this tendency, is a rise in the proportion of income units with a negative amount of net worth, and a decline in the proportion of income units with the largest amounts.

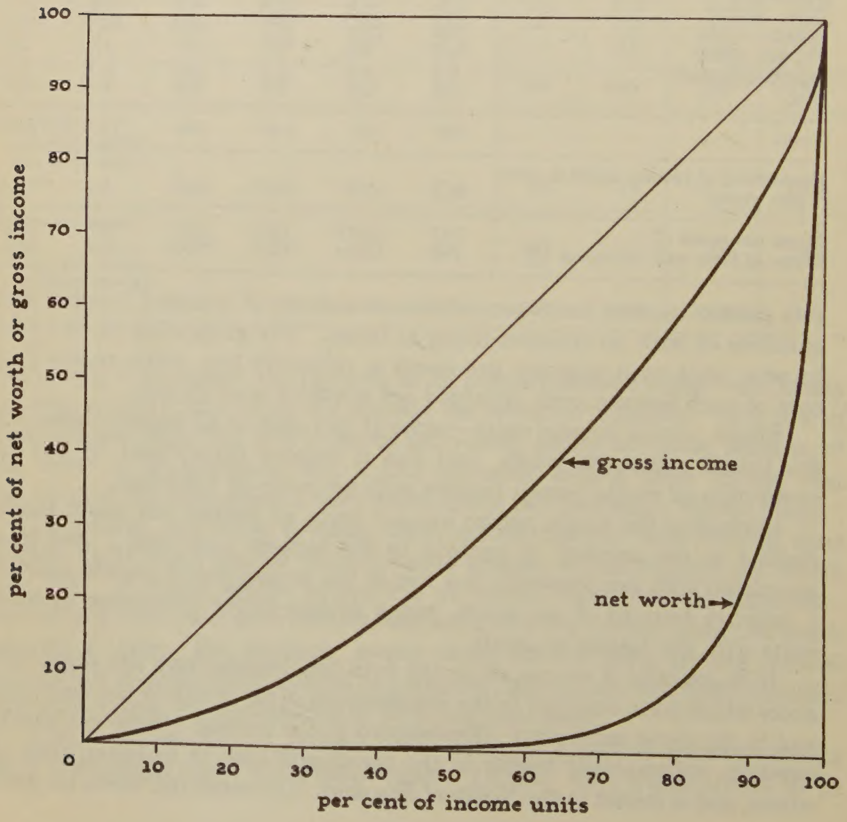
It is doubtful if we can draw any firm conclusions from the slight differences which have emerged in the distributions of net worth in the four regions and in the three town sizes differentiated in the Survey. Mean net worth is, however, substantially higher in the South and East of England, than elsewhere, and is lowest in the North of England. The mean net worth for income units in rural areas in much larger than for those in urban areas, reflecting the ownership of farms, farm buildings and equipment by a relatively small number of income units ; it would seem that net worth is probably more unequally distributed among rural income units than among those living in urban areas.

(2) *Net worth and gross income*

The mean net worth of all income units in the sample was a little less than double the mean annual gross income, *i.e.* the accumulated capital of all income units, as defined in our Surveys, amounted to a little less than two years' income. Some types of assets are more liquid than others, and when we say that an income unit's net worth is equivalent to two years' income it does not mean necessarily that an income unit can cease to earn income for two years and live for that period on accumulated assets. For instance, to live on assets would require in many cases that a house be sold and rent paid for other accommodation.

Diagram I.

NET WORTH & GROSS INCOME



The mean figures conceal great variation in this ratio at different levels of gross income, and from Diagram 1, on which are plotted Lorenz curves for net worth and gross income, it can be seen that net worth is much more unequally distributed than gross income. Given that incomes have been more unequally distributed between different income units in the past than they are to-day, and that higher proportions of these incomes have been used to accumulate assets at higher income levels than at lower, then clearly the cumulative effect is a greater inequality in the ownership of assets than in income. A further complication arises because some of the inequality in asset ownership arises not from income differentials but from the inheritance of wealth and from other capital transfers. Whether assets become more or less equally distributed between income units depends partly on changes in the rate at which capital is accumulated out of incomes, and partly upon changes in inheritance and other taxes.

The variation in the relationship between net worth and gross income can be examined by various attributes such as age and occupation, housing status, geographical location and so on. The relevant data are indicated in Table VII. In the lowest income group (£0–99 per annum), which contained some 5 per cent of all income units, net worth amounted on average to nearly 5 years' gross income, and in the next highest group (£100–199) to about 2½ years' gross income. Such relatively high net worth values at these low income levels reflect the position of some of the retired people aged over 65, who have accumulated capital over a long period of years. As gross income rises so net worth falls to about the equivalent of one year's gross income, and the Survey results indicate that income units with a gross income between £300 and £600 per annum—*i.e.* about 46 per cent of all income units in the sample—had on the average net worth equivalent to roughly one year's gross income.

As gross income rises above £600 per annum net worth increases relatively to annual gross income and the 1.4 per cent of sample income units with a gross income of over £1,500 per annum reported accumulated capital equal to nearly 6 years' current income.

The ratio of net worth to gross income shows wide fluctuations between the different occupational classifications distinguished in the Survey. At the top end of the scale the retired and unoccupied group, which constituted 23 per cent of the income units in the sample, had built up reserves equal to over 6 years' mean gross income ; the self-employed, much smaller in numbers, had net worth equal to just over 5 years' current income. At the lower end of the net worth scale income units in which the head was a skilled manual worker had resources equal to about 7½ months' income ; and in those income units in which the head was an unskilled manual worker net worth amounted to only about 5 months' current income.

The accumulation of assets which accompanies increasing age is apparent from Table VII. In the units in the lowest age group, a large proportion of which, it will be remembered, are secondary income units, net worth was

TABLE VII. *Relation of Net Worth to Income*

Type of income unit	*Proportion of income units* (%)	*Mean gross income* (£)	*Mean net worth* (£)	*Net worth as a proportion of mean gross income* (%)
All income units	100.0	*434*	*803*	185
Gross Income				
£0—99	5.4	*82*	*386*	471
£100—199	17.3	*146*	*384*	263
£200—299	13.7	*251*	*356*	142
£300—399	17.0	*351*	*325*	93
£400—499	16.5	*446*	*419*	94
£500—599	12.2	*545*	*563*	103
£600—699	7.8	*645*	*876*	136
£700—799	2.9	*742*	*1,372*	185
£800—999	3.9	*870*	*2,144*	246
£1,000—1,499	2.1	*1,151*	*3,797*	330
£1,500—1,999	0.5	*1,647*	*9,513*	578
£2,000 and over	0.9	*3,629*	*21,130*	582
Occupation of head				
Self-employed	4.4	*844*	*4,404*	522
Managers and technical	7.3	*977*	*2,572*	263
Clerical and sales	13.9	*403*	*394*	98
Skilled manual	34.7	*466*	*299*	64
Unskilled manual	17.0	*377*	*159*	42
Retired and unoccupied	22.8	*195*	*1,199*	615
Age				
18—24	10.7	*269*	*38*	14
25—34	18.0	*482*	*321*	67
35—44	20.3	*574*	*757*	132
45—54	17.9	*560*	*1,147*	205
55—64	13.2	*409*	*1,197*	293
65 and over	19.9	*240*	*1,178*	491
Sex				
Males	73.8	*512*	*861*	168
Females	26.2	*214*	*638*	298
Region				
Scotland	10.5	*415*	*699*	168
N. of England	26.4	*412*	*597*	145
Midlands and Wales	24.2	*419*	*699*	167
S. and E. England	38.9	*463*	*1,026*	222
Town Size				
Conurbations	36.0	*445*	*589*	132
Other urban	44.9	*420*	*867*	206
Rural	19.1	*445*	*1,115*	251
Number of Persons in I.U.				
One	36.2	*247*	*517*	209
Two	27.0	*488*	*1,313*	269
Three	15.7	*563*	*765*	136
Four	12.6	*591*	*672*	114
Five	5.2	*583*	*707*	121
Six and over	3.4	*596*	*605*	102
Housing Status				
Owns outright	11.1	*617*	*3,890*	630
Owns with mortgage	10.0	*631*	*1,778*	282
Rents—Council	14.3	*456*	*97*	21
Rents—unfurnished	37.1	*404*	*258*	64
Rents—furnished	1.4	*547*	*256*	47
Rent free	3.4	*466*	*1,977*	424
All primaries	77.3	*479*	*982*	205
Secondaries	22.7	*280*	*210*	75

less than two months' income, and for those income units in which the head was between 25 and 34 years of age net worth was equal to about 8 months' current income. When we reach those income units in which the head was aged 65 years or over reserves were approximately equal to 5 years' income. Income units with female heads had accumulated reserves amounting to 3 years' current income, whereas for units with male heads net worth was equal to only about 1¾ years' income.

The regional variation in mean net worth is also indicated in Table VII. Net worth is highest in the south and east of England—income units located there having accumulated, on the average, assets equal to about 2¼ years' current income—and lowest in the north of England where average net worth was equal to about 18 months' income. Income units in the rural areas had accumulated nearly twice the reserves of those living in conurbations, and their average net worth was equal to about 2½ years' current income.

When the ratio between net worth and gross income is analysed on the basis of the number of persons in the income unit, the two person units, which formed a little more than one quarter of all income units in the sample and which, as observed earlier, consist largely of married couples without dependent children, emerge with the most favourable net worth position, having the equivalent of over 2½ years' current income. The largest income units—those containing 6 persons or more—although having the biggest mean gross income, have a low mean net worth, equivalent to about one year's current income.

In the last section of Table VII, in which the relationship between housing status, net worth and gross income is analysed, it should be borne in mind that, apart from the small number of income units owning a business, the value of property is the largest single component of assets ; in consequence we should expect the net worth of house owners to be much larger than that of renters. Thus we find that in the 14 per cent of *primary* units in which the head owned the house outright accumulated assets amounted to just over 6 years' current income. In over half of the income units the accommodation was rented, and accumulated savings in these units amounted to only a few months' current income. Those income units renting council houses, which formed some 14 per cent of all Survey income units, had a low mean net worth with the result that their resources were equal to only between two and three months' current income.

One further notable feature is the high mean net worth of income units living rent free. Their average net worth was equivalent to about 4¼ years' income. Income units living rent free are not noticeably concentrated in particular occupations or levels of income.

Before analysing in more detail the components of net worth a little can be said about two further concepts—the personal assets and the net worth of income units excluding the value of any businesses owned. Personal assets are defined as total assets minus the value of businesses, and personal net worth as total assets minus the value of businesses, minus total liabilities.

No really detailed analyses of these two items have been completed, but in Table VIII are indicated the mean values of personal assets for income units in various age, occupation and gross income groups. The mean net worth of income units (excluding the value of business) by gross income gro is also shown.

TABLE VIII

Personal Assets and Mean Net Worth of Income Units

	Mean personal assets (£)		*Mean personal assets* (£)
All income units	785		
Gross income of head		**Occupation of head**	
£0—99	412	Self-employed	1,195
£100—199	403	Managers and technical	2,905
£200—299	363	Clerical and sales	479
£300—399	332	Skilled manual	368
£400—499	449	Unskilled manual	169
£500—599	621	Retired and unoccupied	1,155
£600—699	957		
£700—799	1,336	**Age of head**	
£800—999	1,960	18—24	50
£1,000—1,499	4,043	25—34	350
£1,500—1,999	6,623	35—44	741
£2,000 and over	18,468	45—54	1,165
		55—64	1,048
		65 and over	1,104

Mean net worth of income units

Gross income of head	*Mean net worth (excluding value of business)* (£)
£0—99	385
£100—199	384
£200—299	337
£300—399	273
£400—499	400
£500—599	514
£600—699	832
£700—799	1,093
£800—999	1,677
£1,000—1,499	3,443
£1,500—1,999	6,307
£2,000 and over	17,395

In the lowest income group differentiated in the Survey (£0–99) mean personal assets amounted to just over £400 ; from this figure the mean amount declines as we progress up the income scale until the mean annual gross income of the income unit reaches about £350. After that the mean value of personal assets rises continuously with income. Among the 0.9 per cent of income units with an annual gross income of £2,000 and over, the mean figure of personal assets per income unit is about fifty times larger than the corresponding figure for units in the income group with the lowest personal assets.

The mean of personal assets is largest for those income units in which the head was classified as managerial or technical. Even without the value of their businesses the self-employed have quite substantial assets, but they amounted on the average to only about 40 per cent of those owned by the managerial and technical group, and to only slightly more than those of the retired and unoccupied.[1]

The effect of excluding the value of business from the mean worth of income units can be seen broadly by comparing Table VIII with Table VII. There is little effect on the mean values at the lower end of the income scale, but as one moves upwards the effect in higher groups is more pronounced. That is to say, the value of the business component of net worth is proportionately greater among the higher income groups.

III. Assets

In this section it is proposed to analyse some of the components of net worth and their distribution. As already mentioned, information was collected in the Survey on six major types of assets—total liquid assets,[2] houses and total property, cars, stocks and shares, businesses, and money owed to the income unit. It is not proposed to discuss at length the distribution of individual as distinct from total liquid assets as these were covered in great detail on the basis of material collected in the 1952 Savings Survey.[3] No detailed analyses of the value of business or of money owed to the income unit have been completed for 1953 ; in the latter case because the number of income units and the amounts involved are small, in the former because this item is restricted to a very narrow section of the sample income units.

(1) *Total liquid asset holdings*

We find that 33 per cent of all income units in the sample had no liquid assets as defined in the 1953 Survey[4]—Table IX. Altogether about 60 per cent of income units had less than £50 in the form of liquid assets. The average amount held by those with some liquid assets in the 1953 Survey was about £290—which is a decline of about £40 from the 1952 Survey results. This decline appears to stem mainly from the poor coverage of the upper income groups, in particular of the self-employed, in the 1953 Survey.[5]

When income units are classified on the basis of their gross income we find that in no income group except the lowest—below £100 per annum—do less than half the income units own some liquid assets ; but the proportion

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[1] The remarks made earlier in this article about the relatively poor coverage of the self-employed in the 1953 Survey are relevant here. It is quite likely that the situation described would have been different if the coverage of this group had been more satisfactory.

[2] For the components of total liquid assets see note 4 of Table I.

[3] See the article by H. F. Lydall in the Bulletin, Vol. 15, Nos. 6–7, June and July 1953, now reprinted and published in : H. F. Lydall. *British Incomes and Savings*. Oxford University Institute of Statistics Monograph. Basil Blackwell, 1955.

[4] This proportion compares very closely with the 1952 Survey data, where the corresponding percentage was 32.

[5] For a more detailed account of the reliability of the liquid assets figures in the 1953 Survey see Bulletin, Vol. 17, No. 1, pp. 116–120.

TABLE IX

Total Liquid Asset Holdings

(percentages of income units)

Type of income unit	*Total liquid assets*							*Mean*	*Mean of those with assets*
	Nil	*£1–49*	*£50–199*	*£200–599*	*£600–999*	*£1,000 and over*	*Total*	*(£)*	*(£)*
All income units	33	26	21	12	4	4	100	*194*	*290*
Gross income									
£0—99	53	15	16	9	2	5	100	*138*	*294*
£100—199...	46	23	15	10	3	3	100	*127*	*234*
£200—299...	42	27	19	7	3	2	100	*101*	*175*
£300—399...	45	24	17	10	1	3	100	*109*	*197*
£400—499...	24	35	24	11	2	4	100	*158*	*208*
£500—599...	26	29	28	12	3	2	100	*123*	*167*
£600—699...	13	33	22	20	7	5	100	*309*	*357*
£700—799...	10	33	28	16	4	8	100	*336*	*372*
£800—999...	5	20	31	24	12	8	100	*422*	*443*
£1,000—1,499	5	4	26	35	9	21	100	*790*	*828*
£1,500—1,999	10	—	32	37	8	13	100	*489*	*544*
£2,000 and over	6	3	6	14	13	58	100	*2,503*	*2,662*
Occupation of head									
Self-employed	23	16	21	19	5	16	100	*596*	*773*
Managers and technical	4	16	27	26	12	15	100	*637*	*664*
Clerical and sales...	27	33	24	11	4	1	100	*118*	*231*
Skilled manual	27	34	24	11	2	2	100	*102*	*140*
Unskilled manual	50	25	18	5	—	2	100	*68*	*134*
Retired and unoccupied	45	15	14	15	4	7	100	*256*	*464*
Age of Head									
18—24	47	38	12	2	—	1	100	*30*	*657*
25—34	27	35	27	8	1	1	100	*86*	*118*
35—44	26	31	27	12	2	2	100	*136*	*184*
45—54	30	21	19	18	6	6	100	*286*	*411*
55—64	31	22	22	13	5	7	100	*310*	*446*
65 and over	42	14	14	16	5	9	100	*280*	*485*

Type of income unit	*Total liquid assets*							*Mean*	*Mean of those with assets*
	Nil	*£1–49*	*£50–199*	*£200–599*	*£600–999*	*£1,000 and over*	*Total*	*(£)*	*(£)*
Sex of head									
Male	31	27	22	13	3	4	100	*201*	*290*
Female	40	24	19	9	4	4	100	*174*	*292*
Number of persons									
One	41	23	19	10	4	3	100	*157*	*269*
Two	29	20	21	18	4	8	100	*306*	*431*
Three	23	33	26	10	3	4	100	*190*	*248*
Four	24	34	26	12	2	2	100	*132*	*174*
Five	35	39	15	6	3	2	100	*128*	*198*
Six or more	51	33	10	5	—	1	100	*47*	*96*
Region									
Scotland	30	31	17	12	6	4	100	*233*	*335*
Northern England	32	31	21	10	2	4	100	*162*	*238*
Midlands and Wales	33	23	24	11	5	4	100	*197*	*295*
South and East England	34	24	20	14	3	5	100	*204*	*311*
Town Size									
Conurbations	37	26	19	11	4	3	100	*166*	*265*
Other urban	31	25	23	12	4	5	100	*218*	*313*
Rural	32	29	19	14	2	4	100	*191*	*279*

NOTE: In this and similar tables the percentages may not add across to 100 exactly because of rounding.

owning increases from this minimum among the lower income groups to 75-85 per cent among those with incomes between £400 and £700, and to 90 per cent or more amongst those with incomes above £700.

Amongst the occupational groups, the self-employed and managerial group have much the largest stocks of liquid resources ; 96 per cent of managers have some liquid funds, a proportion identical with that found in 1952. Nearly three-quarters of the income units headed by a worker in the clerical and sales group or by a skilled manual worker held some liquid assets, but the mean amounts held were very much less than those held by managers or the self-employed. Only about one half of those income units in which the head was an unskilled manual worker had any liquid assets, the mean amount being smaller than that in any other occupational category. Among the retired and unoccupied some 45 per cent of income units had no liquid assets ; but among the remainder who possessed such assets the amounts were comparatively large.

The analysis by age indicates that while the proportion of income units with liquid assets declines at both ends of the scale, their average holding increases throughout the scale. In those income units in which the head was within the age range 35–44 we find the highest proportion of income units with liquid assets ; moreover the findings of Lydall[1] on the basis of the 1952 Survey that in general the rate of accumulation of liquid capital is especially rapid between the ages of 45 and 54, is further substantiated by the data from the 1953 Survey in Table IX.

When the holdings of liquid assets are analysed by the number of persons in the income unit, we find that only about three out of five single persons have some liquid assets, while of the largest income units, *i.e.* those consisting of six or more people, only about a half have any liquid assets, and the amounts are very small. The two person income units, which as already observed consist largely of married couples without dependent children under 18, have much larger average amounts of liquid capital than any other size of income unit, while married couples with one, two or three children are much worse off from this point of view.

The final sections of Table IX provide an analysis by region and town size, but it is not considered to be as reliable an indication as that published earlier,[2] on the basis of the 1952 Survey ; the failure to cover upper income groups and farmers satisfactorily in 1953 appears to have brought about a downward bias in the figures for the south and east of England and rural areas.

(2) *Value of stocks and shares*

Since the 1953 Survey failed to secure an adequate representation of the higher income groups, the estimates derived from the Survey of the proportion of income units owning stocks and shares, and especially of those owning large amounts, are almost certainly too low. It is not possible to

[1] BULLETIN, Vol. 15, Nos. 6 and 7 June and July 1953, p. 216.

[2] *Op. cit.*

assess with any precision the extent of the bias ; it does not seem likely, however, that the proportion of stock and share holders would be increased very much even if the sample were perfectly representative.

Out of the whole population of income units in private households in Great Britain the 1953 Survey results indicate that some 4.1 per cent of income units own stocks and shares worth more than £100—Table X. The mean holding for all income units in the sample was about £190, but the

TABLE X

Holdings of Stocks and Shares

Type of income unit	*Proportion with over £100* (%)	*Mean* (£)	*Mean of those with stocks and shares over £100* (£)
All Income Units	4.1	188	4,436
Gross Income			
£0—499	2.7	42	1,536
£500—999	4.2	92	2,212
£1,000—1,999	26.1	1,105	4,217
£2,000 and over	60.4	11,531	19,077
Occupation of Head			
Self-employed	6.0	143	2,372
Managers and technical	17.8	842	4,665
Clerical and sales	2.6	50	1,877
Skilled manual	0.9	4	419
Unskilled manual	0.7	2	312
Retired and unoccupied	9.0	490	6,047
Age of Head			
18—24	0.1	—	700
25—34	1.2	75	6,106
35—44	3.5	100	2,896
45—54	4.4	398	8,666
55—64	6.7	162	2,373
65 and over	7.8	312	3,932
Region			
Scotland	4.6	169	3,701
Northern England	3.2	80	2,514
Midlands and Wales	4.3	115	2,667
S. and E. England	4.8	314	6,550
Town Size			
Conurbations	2.8	94	3,271
Other urban	5.2	150	2,851
Rural	4.4	450	10,254
Liquid Assets			
Nil and under £100	1.0	15	1,030
£100—999	6.9	343	4,954
£1,000—1,999	34.9	1,337	3,837
£2,000 and over	45.4	2,746	6,049
Net Worth			
Up to £1,000	0.6	2	304
£1,000—1,999	8.7	48	548
£2,000—4,999	17.0	223	1,315
£5,000 and over	59.1	5,100	8,629
N.A.	6.1	818	10,800

mean of those actually with some stocks and shares amounted to about £4,440. (It should be remembered that such figures as these are subject to very large errors.) A further analysis of this 4.1 per cent of income units, indicates that it is comprised of 1.5 per cent with stocks and shares valued at between £100 and £500 ; 1.0 per cent with between £500 and £2,000 ; and 1.6 per cent over £2,000. As can be seen from Table X, the proportion of income units who own stocks and shares begins to increase rapidly once we reach those whose incomes exceed £1,000 a year. Sixty per cent of the income units with a gross income of over £2,000 held stocks and shares. The ownership of such securities is closely associated with the size of liquid asset holdings and with total net worth. Broadly, as one rises up the liquid asset scale the proportion of income units owning some stocks and shares rises. Practically no stocks and shares are owned by income units whose net worth is between £0–99— about 46 per cent of all income units in the sample—or by income units with negative net worth. At the top end of the net worth scale, some 60 per cent of the income units with a net worth of £5,000 and over owned stocks and shares of more than £100. Clearly from Table X the net worth of the income unit has to reach about £2,000 before really substantial amounts of stocks and shares are likely to be held.

Amongst the occupational groups the findings of the 1953 Survey broadly substantiate those of 1952. Manual and clerical workers rarely own stocks and shares, but about 18 per cent of the managers have investments of this sort, while the retired and unoccupied and self-employed occupy an intermediate position. Although, as pointed out above, the sampling errors of the means in Table X are probably large, nevertheless the errors in the means are not likely to be so large as to nullify the evidence of substantial holdings of stocks and shares among a small proportion of the retired and unoccupied income units. As we have found with other assets, stocks and shares are held more frequently as the head of the income unit becomes older. The holding of such securities is negligible in those income units where the head is between 18 and 24 years of age, but about 8 per cent of income units with a head aged 65 and over own them.

The proportion owning stocks and shares does not vary to any appreciable extent between the four regions differentiated in the Surveys. In both the 1952 and 1953 Surveys the proportion has been a little lower in the north of England than elsewhere, and slightly higher in the south and east. However, the mean figures in Table X seem to indicate quite clearly that much larger amounts of stocks and shares are held by income units in the south and east than elsewhere.

One of the more noteworthy points of the analysis of stocks and shares is the large mean amounts held by income units in the rural areas. It is not possible to indicate from the data available which occupational groups in the rural areas own these large amounts. It has been observed earlier that the coverage of farmers in the 1953 Survey was unsatisfactory and it may well be that the explanation stems from wealthier retired people living in such areas, and from income units in which the head was a manager and resided in the country.

(3) *Gross value of house*

The third component of net worth consists of the value of houses owned, either outright or with a mortgage—Table XI. This component constitutes much the largest part of net worth. We find that in the 1953 Survey just over one-fifth of all income units owned their own house ; and this proportion is almost identical with that found in the 1952 and 1954 Surveys. The mean value of the houses owned was just over £1,800.[1] The most common valuation was between £1,000 and £2,000. In only about a tenth of the cases was the value of the house estimated at more than £5,000.

With the exception of the two gross income groups at the lower end of the income scale, the proportion of income units owning their own house increases fairly steadily with income. Above an income level of £800 a year well over one half of the income units owned their own houses, and above £2,000 a year 80 per cent of income units owned. The slight irregularity in the pattern in the low income groups is probably due to the retired and unoccupied, since many of them have relatively low incomes, but are living in houses purchased during their working years. Apart again from these two low income groups, Table XI indicates that the mean value of the houses of those actually owning rises steadily as income rises.

The occupational analysis indicates that house ownership is more commonly found among the self-employed and managerial groups than in other occupational categories ; nearly half of them were found to own their own house at the time of the 1953 survey. Ownership was least common among the unskilled manual workers. The value of the house is fairly closely related to the occupation and income of the head of the income unit. For instance, the managers have the highest mean gross income and much the highest house valuations. One interesting point, however, seems to be that the mean value of the houses owned by skilled manual workers, despite their substantially higher average incomes, is smaller in relation to their incomes than in the case of the clerical and sales group. There does not appear to be any clear explanation for this. It may be due in part to the problem of social status : it is also possible that the variability in earnings is greater among the skilled manual workers and hence the amount of mortgage repayments which they can be sure of making regularly is less.

Broadly, the proportion of income units owning their own houses increases with age, as does the mean value of the houses owned. A much smaller proportion of income units in Scotland own their own houses than in England, where there is no really significant regional variation in the proportions owning. However, values are substantially higher in the south and east than elsewhere.

There is a marked inverted U-effect in the distribution when the pro-

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[1] The subjective element entering into the property valuations should be remembered.

TABLE XI

Gross Value of Owner-occupied Houses

(percentages of income units)

Type of income unit	*Gross value of houses*								*Mean*	*Mean of those with house £100 and over*
	Nil and under £100	*£100–999*	*£1,000–1,999*	*£2,000–2,999*	*£3,000–4,999*	*£5,000 and over*	*N.A.*	*Total*	(£)	(£)
All income units	79	5	7	5	2	1	1	100	*385*	*1,818*
Gross income										
£0—99	84	5	3	3	1	—	3	100	*253*	*1,608*
£100—199	83	7	4	2	1	—	3	100	*222*	*1,281*
£200—299	87	4	6	2	—	—	1	100	*146*	*1,360*
£300—399	85	6	5	3	—	—	1	100	*205*	*1,352*
£400—499	85	5	6	2	1	—	1	100	*199*	*1,360*
£500—599	77	6	8	6	2	—	1	100	*378*	*1,626*
£600—699	74	3	9	12	1	—	1	100	*493*	*1,893*
£700—799	61	3	16	13	5	1	1	100	*751*	*1,952*
£800—999	43	8	20	15	9	1	4	100	*1,105*	*1,951*
£1,000—1,499	39	—	7	29	20	5	—	100	*1,960*	*3,215*
£1,500—1,999	27	—	5	13	40	13	2	100	*2,599*	*3,556*
£2,000 and over	19	1	2	16	24	36	2	100	*3,691*	*4,579*
Occupation of head										
Self-employed	51	15	15	7	5	4	3	100	*1,014*	*2,067*
Managers and technical ...	54	2	9	19	12	4	—	100	*1,311*	*2,830*
Clerical and sales	83	3	5	5	2	1	1	100	*323*	*1,925*
Skilled manual...	82	5	8	4	—	—	1	100	*241*	*1,366*
Unskilled manual	91	3	2	2	—	—	2	100	*112*	*1,301*
Retired and unoccupied ...	75	7	6	6	2	1	3	100	*414*	*1,648*

Type of income unit	*Gross value of houses*								*Mean*	*Mean of those with house £100 and over*
	Nil and under £100	*£100–999*	*£1,000–1,999*	*£2,000–2,999*	*£3,000–4,999*	*£5,000 and over*	*N.A.*	*Total*	*(£)*	*(£)*
Age of head										
18—24	99	—	1	—	—	—	—	100	*10*	*1,500*
25—34	88	4	5	2	—	—	1	100	*181*	*1,480*
35—44	77	6	6	7	3	1	1	100	*445*	*1,912*
45—54	72	4	12	6	3	1	2	100	*513*	*1,856*
55—64	71	5	7	12	2	1	2	100	*598*	*2,039*
65 and over	73	9	6	5	3	1	3	100	*452*	*1,672*
Region										
Scotland	89	4	2	3	1	1	—	100	*206*	*1,846*
Northern England	76	7	10	4	1	1	1	100	*346*	*1,440*
Midlands and Wales	78	6	7	5	2	1	1	100	*386*	*1,743*
South and East England ...	79	4	5	7	3	1	1	100	*458*	*2,147*
Town Size										
Conurbations	83	3	4	6	2	1	2	100	*337*	*1,874*
Other urban	74	6	10	6	2	1	1	100	*451*	*1,630*
Rural	82	7	4	2	2	1	2	100	*314*	*1,672*
Rateable value										
£0—4	78	14	8	—	—	—	—	100	*178*	*825*
£5—9	87	8	3	—	—	—	2	100	*93*	*732*
£10—14...	83	7	5	3	1	—	1	100	*207*	*1,248*
£15—19...	75	3	13	7	1	—	2	100	*414*	*1,640*
£20—29...	69	3	11	13	2	—	2	100	*587*	*1,908*
£30—39...	72	1	4	13	7	2	1	100	*780*	*2,789*
£40—49...	70	—	4	6	15	3	2	100	*968*	*3,254*
£50—59...	64	2	4	4	17	9	—	100	*1,580*	*4,397*
£60—79...	80	—	—	1	3	14	2	100	*1,130*	*5,588*
£80—119	78	—	—	—	14	5	3	100	*937*	*4,214*
£120 and over	94	—	—	—	—	4	2	100	*707*	*12,250*

portion of income units owning is analysed by rateable value—larger proportions owning in the middle ranges of rateable value and smaller proportions at the lower and higher ranges. The very small proportions of income units owning with a rateable value of over £120 probably arises from the inclusion of a few hotels and commercial boarding houses in which the head of the income unit interviewed is the manager and not the owner of the property. In the ranges of rateable value below £50 per annum the largest proportion of people owning is found within the rateable range £20–29 a year, where the value of the house owned is estimated at about £1,900. But the highest proportion of income units owning their own house is found in the rateable value range £50–59, where the estimated value of the house exceeds £3,000 in most cases.

(4) *Gross value of total property*

Respondents were asked in the 1953 Survey if they owned, in addition to an owner-occupied dwelling, any other house or property. The distribution of ownership and mean values of total property, including owner-occupied houses, are given in Table XII.

As can be seen from a comparison of Tables XI and XII ownership of houses constitutes much the largest element in property ownership. The number of income units owning property of all types is increased by only about one percentage point when property other than owner-occupied houses is included. The inclusion of other property increases the mean for all income units by about £55 to £439. The mean value of owner-occupied houses is just over £1,800, while the corresponding mean value of total property for income units actually owning some property is £1,980. Thus, the distributions for total property are not very different from those for house-ownership. The income units which appear to own property other than their own houses are those with self-employed or managerial heads.

The close agreement between the 1953 and 1954 Survey data on property ownership is worth noting.[1] The mean amounts of property owned per income unit (£439) happen to be identical in both Surveys, but the average value of total property for those income units actually owning some property was £1,910 in 1954 (about £70 less than the figure for 1953). In both Surveys about 3½ per cent of all income units owned property worth more than £3,000.

(5) *Value of cars*

The other physical asset included in the Survey estimate of net worth, about which detailed analyses have been prepared, consists of motor-cars. The data are presented in Table XIII. Cars are owned by about 9 per cent of the income units, but their contribution to total net worth is small. The mean value per income unit was only £24 in 1953, but the mean value of cars in those income units actually owning was £268.

Cars are owned by only a small proportion of income units with a gross

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[1] For a more detailed account of this see BULLETIN, Vol. 17, No. 2, May 1955, p. 152.

TABLE XII *Gross Value of Total Property* (percentages of income units)

Type of income unit	*Gross value of total property*							*Mean*	*Mean of those with property of over £100*
	Nil and up to £100	*£100–999*	*£1,000–1,999*	*£2,000–4,999*	*£5,000 and over*	*N.A.*	*Total*	*(£)*	*(£)*
All income units	78	5	6	8	1	2	100	*439*	*1,980*
Gross income									
£0—99.	84	5	3	3	1	3	100	*299*	*1,902*
£100—199...	82	6	5	4	—	3	100	*247*	*1,367*
£200—299...	85	5	6	3	—	1	100	*225*	*1,543*
£300—399...	84	6	5	4	—	1	100	*225*	*1,374*
£400—499...	85	5	5	4	—	1	100	*222*	*1,493*
£500—599...	75	7	8	9	—	1	100	*437*	*1,719*
£600—699...	73	3	9	14	—	1	100	*539*	*2,004*
£700—799...	58	5	16	19	1	1	100	*868*	*2,066*
£800—999...	44	6	16	30	2	2	100	*1,273*	*2,271*
£1,000—1,499	38	1	6	49	5	—	100	*1,926*	*3,124*
£1,500—1,999	24	—	5	36	32	3	100	*4,341*	*5,739*
£2,000 and over	16	1	2	39	39	3	100	*4,263*	*5,100*
Occupation of head									
Self-employed	48	13	11	20	5	3	100	*1,373*	*2,640*
Managers and technical	51	3	9	31	5	1	100	*1,429*	*2,925*
Clerical and sales...	83	3	5	7	1	1	100	*350*	*2,037*
Skilled manual	82	6	8	4	—	1	100	*257*	*1,394*
Unskilled manual	91	3	2	2	—	2	100	*125*	*1,358*
Retired and unoccupied	74	7	7	8	1	3	100	*497*	*1,889*
Age of head									
18—24	98	1	1	—	—	—	100	*15*	*1,050*
25—34	87	4	6	2	—	1	100	*185*	*1,433*
35—44	76	6	6	10	1	1	100	*486*	*2,034*
45—54	71	5	11	9	1	3	100	*582*	*2,009*
55—64	69	6	7	15	1	2	100	*632*	*2,034*
65 and over	72	8	7	8	2	3	100	*596*	*2,129*
Region									
Scotland	86	5	3	4	1	1	100	*257*	*1,887*
Northern England	74	8	10	6	1	1	100	*410*	*1,612*
Midlands and Wales	77	6	7	8	1	1	100	*419*	*1,827*
South and East England	77	4	5	10	2	2	100	*519*	*2,297*
Town Size									
Conurbation	82	3	4	8	1	2	100	*368*	*2,047*
Other urban	72	7	9	9	1	2	100	*510*	*1,843*
Rural	81	7	4	5	2	1	100	*403*	*2,147*

income of less than £600 a year. Thereafter, the proportion owning increases rapidly, and we find that about 60 per cent of income units with an annual gross income in excess of £1,000 own one or more cars. As we should expect those income units in which the head is either self-employed or in the managerial category most frequently own a car. Broadly, the older the head of the income unit the more likely he is to own a car. A higher proportion of income units in the south and east of England own cars than in other areas of Great Britain and the mean value of cars is also higher in this area than elsewhere. Finally, cars are more frequently owned by income units in rural areas than in the urban areas.

(6) *Value of businesses owned*

It was observed at the beginning of this article that no detailed study had been carried out on the value of unincorporated businesses owned by income units. It is possible, however, to say a little about this component of net worth. The self-employed in 1953 were asked what they thought ' their business would fetch as a going concern, making allowances for money owed to the business and debts or mortgages owed by the business ' including ' the value of any property belonging to the business '. It will be appreciated that unincorporated businesses are a heterogeneous collection. Many awkward conceptual difficulties are involved in estimating their values, and at best many of the answers given could be no more than rough estimates, so that the answers need to be treated with great care. Only about 5 per cent of income units own a business, and within this 5 per cent the variation in values covers a tremendous range. The distribution is also highly skewed.[1] The average value of businesses owned was estimated to be about £2,750 in 1953. It is reassuring that the corresponding estimate from the 1954 Survey was £2,850. It will be seen from Table I that the mean value of business per income unit for the sample as a whole was £120 in 1953. It rose to £218 in 1954, but the increase was clearly not due to any large change in the Survey estimate of the average value of businesses, but to the increase in the proportion of self-employed in the 1954 sample. The proportion of self-employed was almost certainly under-estimated in 1953, and the 1954 estimate of this component of net worth is very probably superior.

The final type of asset—miscellaneous loans owed to income units—is insignificant and was not tabulated separately in 1953. In 1954 the mean for all income units amounted to only £7.

(7) *Summary of asset ownership*

In general, the ownership and value of the assets included in net worth seem to follow fairly standard patterns. They tend to increase with income and age, but to decline in the highest age group, as capital accumulated during the working years of life is run down. Ownership tends to be concentrated among the self-employed and managers, and it is in these two occupational

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[1] BULLETIN, Vol. 17, No. 2, May 1955, p. 153.

TABLE XIII. *Value of Car* (percentages of income units)

Type of income unit	*Value of car*							
	No car	*Up to £99*	*£100–£499*	*£500–999*	*£1,000 and over*	*Total*	*Mean (£)*	*Mean of those with car (£)*
All income units	91	2	6	1	(0.1)	100	*24*	*268*
Gross Income								
Under £200	99	(.4)	(.1)	—	—	100	—	*41*
£200—399	96	2	2	—	—	100	*4*	*104*
£400—599	91	3	6	—	—	100	*15*	*171*
£600—999	77	4	16	3	—	100	*55*	*241*
£1,000 and over	41	6	30	21	2	100	*249*	*422*
Occupation of Head								
Self-employed	52	14	28	5	1	100	*113*	*234*
Managers and technical	63	3	26	7	1	100	*125*	*340*
Clerical and sales	92	2	5	1	—	100	*15*	*186*
Skilled manual	93	3	3	1	—	100	*13*	*183*
Unskilled manual	97	1	2	—	—	100	*4*	*147*
Retired, etc.	98	1	1	—	—	100	*5*	*218*
Age of Head								
18—24	98	1	1	—	—	100	*4*	*166*
25—34	94	2	3	1	—	100	*11*	*186*
35—44	86	3	10	1	—	100	*35*	*246*
45—54	85	3	10	2	—	100	*36*	*241*
55—64	88	4	7	1	—	100	*28*	*233*
65 and over	96	1	2	1	—	100	*13*	*340*
Region								
Scotland	92	2	4	2	(0.3)	100	*24*	*266*
Northern England	94	1	4	1	(0.1)	100	*16*	*245*
Midland and Wales	92	1	6	1	(0.1)	100	*23*	*268*
South and East England	89	2	7	2	(0.1)	100	*30*	*277*
Town Size								
Conurbations	94	1	4	1	(0.1)	100	*18*	*263*
Other urban	93	1	5	1	(0.1)	100	*22*	*283*
Rural...	85	3	10	2	(0.1)	100	*40*	*254*

groups that the highest values of the assets are found. Since such a large part of total assets consists of the value of property, assets tend to reach their maximum values among owner-occupiers.

Income units in the south and east of England have larger amounts of capital than those in other parts of the country ; and, on the average, amounts are higher in rural areas than in urban areas.

Finally, the ownership and value of assets is closely related to the number of persons in the income unit. In general, it is safe to assume that two person income units are married couples without dependent children under 18 years of age, and that the larger income units are married couples with dependent children. Thus, the proportion of income units with capital assets, and the absolute amounts of these assets, are, with the exception of single person income units, inversely related to the number of persons in the unit, and, therefore, to the number of children.

(8) *The concentration of asset ownership*

As we have seen there is a great variation in the distribution and in the amounts of assets held by income units. Lorenz curves have been prepared for four of the assets discussed—stocks and shares, the value of car(s) owned, total property and total liquid assets—and are shown in Diagram II.[1] The relative degree of concentration of the four assets emerges quite clearly. We think the relationship between the curves provides a fairly accurate picture ; but, as we have seen, the actual figures from which the points were plotted frequently relate to only very small numbers of sample income units, so that the sampling errors are probably large. In the assets separately distinguished in this paper stocks and shares are the most highly concentrated, since only about 4 per cent of income units in the 1953 Savings Survey[2] owned stocks and shares worth more than £100. The detailed analysis on which the Lorenz curve of stocks and shares is based indicates that 0.8 per cent of income units owned stocks and shares worth £5,000 and over, and these units possessed 78 per cent of the total value of all stocks and shares owned by all income units.

Ownership of motor-cars is slightly more dispersed since we have shown earlier that some 9 per cent of income units owned one or more cars. 1.3 per cent of income units had cars valued at over £500 and they owned 38 per cent of the total value of all cars. The most common valuation put by heads of income units on their cars was less than £200, and 3.3 per cent of sample income units owned cars in this range comprising 15.6 per cent of the total value of all cars.

A little more than one fifth of income units owned property, and thus the ownership of property is not nearly so concentrated as the ownership either

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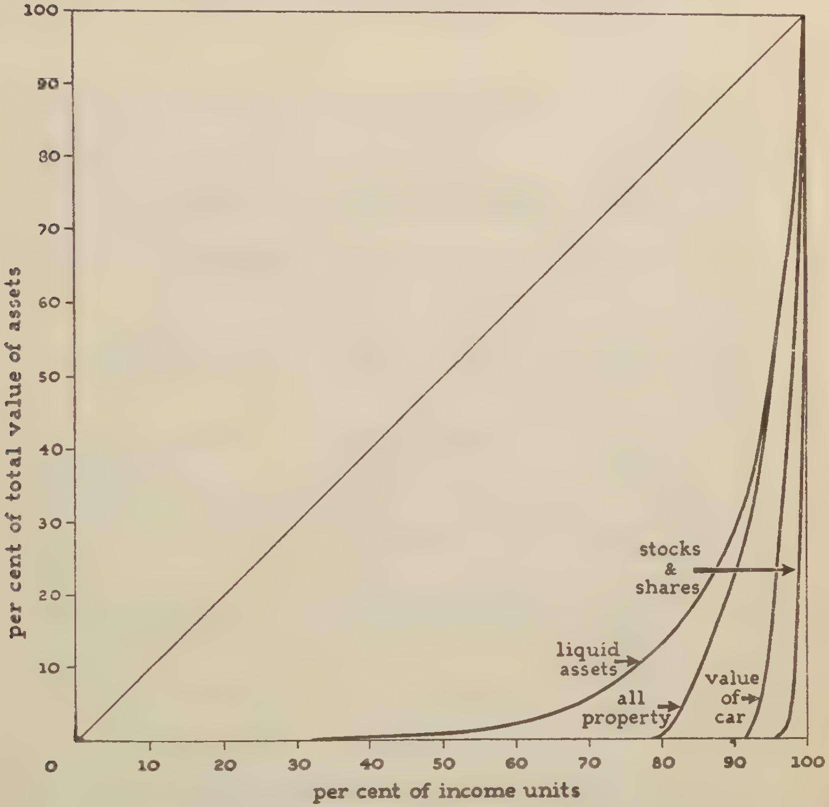
[1] A diagonal line joining the zero and opposite corners of the graph represents the line of perfect equality. The area to the right, between this diagonal and each curve, is a measure of the degree of inequality.

[2] As is pointed out later in this section the ownership of certain of the *components* of total liquid assets is even more highly concentrated than that of stocks and shares.

Diagram II.

THE CONCENTRATION OF ASSET OWNERSHIP



of cars or stocks and shares. About 1 per cent of income units possessed property valued at over £5,000 and they owned nearly 17 per cent of the total value of all property between them ; a further 8 per cent of income units with property valued at between £2,000 and £5,000 owned about 53 per cent of the value of all property. The most commonly occurring property values are between £1,000 and £2,000, and just over one-fifth of the total value of property of all income units was owned by the 6.5 per cent of income units with property in this valuation range. Finally, we find some 6 per cent of income units, with property worth under £1,000, owning 8 per cent of the total value of property.

We have seen that about two-thirds of all income units hold some liquid assets and that about half of these hold less than £100. Some 4½ per cent of income units with liquid assets of more than £1,000 owned 50 per cent of the total value of all liquid asset holdings, while 2 per cent of income units

TABLE XIV

Total Liabilities (percentages of income units)

Type of income unit	*Total liabilities*								*Mean*	*Mean of those with liabilities*
	Nil	*£1–9*	*£10–49*	*£50–499*	*£500–999*	*£1,000 and over*	*N.A.*	*Total*	*(£)*	*(£)*
All income units	69	6	11	8	3	3	(0.2)	100	*96*	*308*
Gross income										
£0—99	92	2	1	3	—	(0.3)	1	100	*15*	*202*
£100—199	89	2	5	2	1	1	(0.4)	100	*19*	*166*
£200—299	80	8	5	5	—	2	(0.1)	100	*26*	*132*
£300—399	72	8	9	6	4	1	—	100	*58*	*210*
£400—499	59	7	19	10	4	1	(0.1)	100	*50*	*121*
£500—599	52	10	17	14	4	3	—	100	*105*	*218*
£600—699	53	6	19	13	4	5	—	100	*131*	*276*
£700—799	53	3	16	10	5	12	1	100	*233*	*500*
£800—999	46	2	9	21	9	13	—	100	*340*	*627*
£1,000—1,499	55	1	—	12	6	26	—	100	*642*	*1,420*
£1,500—1,999	47	—	17	3	20	10	3	100	*478*	*910*
£2,000 and over	58	—	1	7	7	27	—	100	*1,249*	*2,990*
Occupation of head										
Self-employed	60	3	7	13	9	8	(0.6)	100	*309*	*774*
Managers and technical ...	60	3	6	7	6	18	(0.2)	100	*419*	*1,052*
Clerical and sales	69	4	11	8	5	3	—	100	*93*	*305*
Skilled manual...	60	8	15	11	3	3	—	100	*81*	*202*
Unskilled manual	67	11	15	6	1	(0.1)	(0.1)	100	*27*	*83*
Retired and unoccupied ...	88	2	4	4	1	1	(0.7)	100	*28*	*223*
Age of Head										
18—24	85	6	7	1	—	1	—	100	*11*	*75*
25—34	56	9	18	9	5	3	—	100	*107*	*246*
35—44	54	6	16	14	3	7	(0.1)	100	*172*	*376*
45—54	64	9	10	10	5	2	(0.1)	100	*136*	*372*
55—64	74	5	9	5	4	3	—	100	*85*	*332*
65 and over	88	2	3	4	1	1	1	100	*23*	*185*

Type of income unit	*Total liabilities*								*Mean*	*Mean of those with liabilities*
	Nil	*£1–9*	*£10–49*	*£50–499*	*£500–999*	*£1,000 and over*	*N.A.*	*Total*	*(£)*	*(£)*
Region										
Scotland	81	6	8	2	1	2	—	100	*81*	*437*
Northern England	63	8	13	9	4	3	(0.3)	100	*99*	*266*
Midlands and Wales	69	6	10	9	3	3	(0.4)	100	*91*	*294*
S. and E. England	70	5	11	8	3	3	(0.1)	100	*100*	*329*
Town Size										
Conurbations	68	6	13	7	3	3	(0.1)	100	*81*	*256*
Other urban	68	6	10	9	4	3	(0.3)	100	*118*	*363*
Rural	73	7	8	7	3	2	(0.1)	100	*72*	*266*
Number of Persons										
One	87	4	5	2	1	1	(0.4)	100	*21*	*153*
Two	68	5	10	9	5	3	—	100	*99*	*311*
Three	57	6	15	11	5	6	—	100	*171*	*397*
Four	47	10	20	14	3	6	(0.2)	100	*152*	*289*
Five	49	14	14	13	5	5	(0.3)	100	*248*	*483*
Six and over	51	12	24	11	—	2	—	100	*77*	*156*
Housing Status										
Owns outright	83	3	4	8	1	1	(0.1)	100	*88*	*491*
Owns with mortgage ...	2	—	1	40	27	28	2	100	*767*	*788*
Rents—Council	66	8	19	7	—	—	—	100	*12*	*34*
Rents—unfurnished	72	9	15	4	(0.1)	(0.1)	—	100	*14*	*50*
Rents—furnished	73	6	19	2	—	—	—	100	*8*	*28*
Rent free	79	5	11	4	—	(0.4)	(0.4)	100	*17*	*80*
Secondary I.U.s	86	6	5	2	1	(0.1)	—	100	*10*	*73*

with liquid assets of £2,000 and over owned 37 per cent of the total value of holdings. Thus we find that, although liquid assets are held by a much larger number of income units than other more illiquid forms of assets, a relatively small number of income units hold most of the total value of liquid assets.

The degree of concentration of the *components* of total liquid assets varies a great deal. For instance, about one third of all income units reported that they had deposits in the Post Office Savings Bank ; just over one fifth of income units held National Savings Certificates. In contrast to these relatively widely held liquid assets, Defence Bonds were owned by only about 3½ per cent of income units, and only 3 per cent held shares or deposits in building societies ; the mean amounts held of those two assets are much larger than those held in the Post Office Savings Bank and in National Savings Certificates, and they tend to be much more heavily concentrated in the upper income groups.[1]

IV. LIABILITIES

(1) *The distribution of total liabilities*

We turn now to the liabilities side of the net worth account. We shall deal first of all with total liabilities, and then with its components. Much the largest share of total liabilities consists of mortgage debt outstanding on owner-occupied houses. In Table XIV are shown the distribution and mean amounts of liabilities in the income units in the 1953 sample Survey. We find that a little less than one third of all income units had liabilities of one type or another ; the mean amount per income unit for the sample as a whole was £96, but the mean amount of debt of those actually with some liabilities was about £310.

In general, the proportion of income units with liabilities increases until income reaches about £1,000 a year ; thereafter, the proportion tends to fall. Further, the mean value of liabilities appears to rise fairly steadily with income, but the pattern for those actually with some liabilities is not so clear-cut ; in this case the mean at first tends to fall as we move up the income scale. The apparent regularity in the pattern is broken on all counts in the annual gross income group of £1,500–1,999. We have no really reliable evidence why this occurs, but it may well arise from the failure in the 1953 Survey to obtain a satisfactory coverage of the higher income groups.

The occupational analysis of total liabilities indicates that the proportion of income units having liabilities is highest among those in which the head was self-employed, managerial etc., or a skilled manual worker ; it is lowest in those income units where the head was retired and unoccupied. The mean amount of liabilities was found to be much higher among the managerial group than in any other. It is possible, however, that the relatively poor coverage of the self-employed in 1953 may have imparted a downward bias to their mean. Of the income units in which the head was a manager 18 per cent had liabilities totalling more than £1,000—a proportion more than double that found in the case of the self-employed—and the resultant mean among the managers actually having liabilities was over £1,000, more than three times the mean of those with liabilities in the sample as a whole.

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[1] For a more detailed account of the components of total liquid assets on the basis of the 1952 data see H. F. Lydall, BULLETIN, Vol. 15. Nos. 6 and 7, June and July 1953.

The proportion of income units having liabilities increases with age up to the point where the head's age is about 45, and thereafter declines until among those aged 65 and over only about 12 per cent of income units have any debts. The mean amounts of the liabilities follow the same pattern, rising to about £380 for income units in the age range 35–44, and then declining.

As we have seen many income units do not have liabilities, and although certain interesting and apparently reasonable differences can be observed between the four geographical areas and three town sizes differentiated in the Survey, it should be emphasised that we are dealing with only a small number of income units and that the sampling errors will probably be large. The Survey data show that a substantially smaller proportion of income units in Scotland have liabilities than in England, but that the mean for those income units in Scotland actually with liabilities is nearly £100 more than elsewhere. As we have seen earlier the proportion of income units in Scotland living in owner-occupied houses is much less than in other areas, and the proportion with mortgage debt is smaller. A higher proportion of income units in northern England have outstanding liabilities than in the other areas differentiated in the Survey, but the mean amount for these income units was smaller. Income units in the rural areas do not have liabilities quite so frequently as those in the urban areas ; and it is noticeable that the mean amounts of liabilities are substantially higher in other urban localities than in either conurbations or rural areas.

The next section of Table XIV shows the distribution and mean amounts of liabilities for different sizes of income unit. Here we find a definite tendency for the proportion of income units with liabilities to rise as the number of persons per income unit rises. Thus, only 13 per cent of single person income units had liabilities, whereas about 50 per cent of income units consisting of four or more persons had some debt. Furthermore, in general average liabilities tend to increase with size of income unit but there is a fall when the largest size differentiated in the Survey—6 or more persons—is reached. There are relatively very few of these largest size income units with liabilities over £500, but quite a lot have small debts of less than £50. The result, of course, is a very substantial drop in average liabilities compared with the other size groups.

In the final section of the table, liabilities are analysed by the housing status of the head of the income unit. As we have pointed out much the most important aspect of liabilities is their concentration on those income units purchasing a house with a mortgage. The mean amount of liabilities of this

TABLE XV

Relationship between Personal Assets and Liabilities

Type of income unit	*Mean liabilities as percentage of mean personal assets*	*Type of income unit*	*Mean liabilities as percentage of mean personal assets*
All income units	12.2	**Occupation of Head**	
Gross income		Self-employed	15.5
£0—£99	3.6	Managers and technical ...	14.4
£100—199	4.7	Clerical and sales	19.4
£200—299	7.2	Skilled manual	22.0
£300—399	17.5	Unskilled manual	16.0
£400—499	11.1	Retired and unoccupied ...	2.4
£500—599	16 9	**Age of Head**	
£600—699	13.7	18—24	22.0
£700—799	17.4	25—34	30.6
£800—999	17.3	35—44	23.2
£1,000—1,499	15.9	45—54	11.7
£1,500—1,999	7.2	55—64	8.1
£2,000 and over	6.8	65 and over	2.1

group (£767) is eight times the mean for the whole sample.[1] More income units dwelling in rented council houses have liabilities than those living under any other conditions of tenure, but the mean amounts of liability per income unit renting Council houses are small—the debts, as we shall see in more detail later, being almost entirely for goods bought on hire purchase.

Apart from secondary income units—*i.e.* those where the head of the income unit is not the head of a household—the smallest proportion of income units with liabilities occurs among those owning their houses outright. But the mean of liabilities for such owner-occupiers actually with liabilities is high—almost £500 per income unit. A likely explanation for this large mean amount would appear to be that people raise money by means other than mortgages, say, from a bank, using their house as security.

(2) *Personal assets and liabilities*

As we saw earlier, we can take out the value of businesses from the assets side of the net worth account and arrive at a figure for personal assets. In Table XV we show the relationship between personal liabilities and personal assets—henceforward referred to as the debt ratio. Over all the income units in the sample the debt ratio was about one-eighth.

The debt ratio is small at the lower end of the gross income scale ; it rises to reach a peak of about 17 per cent in the middle income ranges, and thereafter declines to about 7 per cent at income levels over £1,500 a year. Variations in the ratio between occupations are considerable. The figures in Table XV indicate that it is highest for income units in which the head is a skilled manual worker, or in the clerical and sales group. It is very low for the retired and unoccupied, being closely related to the effect of age, as we shall see later. For the three other occupational classifications the debt ratio varies between 14 and 16 per cent.

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[1] The figure of 2 per cent of income units shown in Table XIV as owning with a mortgage, but with a nil amount of total liabilities, arises from a few cases of rather special arrangements for house purchase. For instance, there may be particular family arrangements whereby a son borrows a capital sum from his father, on which he pays interest each year, but never repays any capital. For simplicity in coding and tabulations such odd cases have been included with the ' owns with mortgage ' group.

A clear pattern emerges when the ratio is analysed by age, and this again serves to emphasise the importance of the age factor in the analysis of the accumulation of capital and the amount of debt incurred by income units. We find that the ratio rises to a peak in the 25–34 age group, and thereafter declines to a very low proportion in income units in which the head was aged 65 or over. This pattern reflects the incurring of debt in the form of mortgages, hire purchase, and to some extent, bank overdrafts, by income units when new homes are started and families are being raised. After the initial capital items have been purchased, and, in the case of mortgages, as the amount outstanding declines as repayments are made, the amount of debt tends to fall, while the accumulation of capital proceeds.

(3) *Mortgage debt*

Much the most important component of the liabilities' side of the net worth account consists of mortgage debt, most of which is in respect of owner-occupied houses. Out of a mean figure for total liabilities for all Survey income units of £96, £71 is accounted for by mortgage principal outstanding on owner-occupied houses. Great care was taken at the editing stage to work out how much mortgage principal was outstanding at the time of the interview, but it may not always have been possible on the basis of the information given to achieve complete accuracy. Frequently, owner-occupiers take out an endowment policy in conjunction with a mortgage ; in this case payments on the policy are treated as if they were repayments of the mortgage principal borrowed, although in practice the principal is repaid in one lump sum when the policy reaches maturity.

The distribution and mean amounts of mortgage principal outstanding on owner-occupied property are shown in Table XVI. For simplicity the information from the 1953 Survey was rounded down to the nearest £100, *i.e.* the last two digits were ignored, prior to punching and tabulating[1]—and it is not possible therefore, to distinguish for all types of income units shown in Table XVI between those for which there was no mortgage principal outstanding and those where it was less than £100 ; and for this reason the lowest interval shown in Table XVI is labelled ' nil and under £100 '. A handcount of such cases shows that 0.6 per cent of all income units had an amount of mortgage principal outstanding between £1 and £99, the mean amount being £53. The process of rounding down to the lower limit of each class interval results in some downward bias in the mean amounts in Table XVI. The 1954 Survey data on mortgage debt outstanding compare very closely with those for 1953, although the small changes which occurred between the two years would seem to be opposite to the known trend in population.[1] The 1954 data indicate that 1.0 per cent of income units had mortgage principal outstanding less than £100.

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[1] BULLETIN, Vol. 17, No. 2, May 1955, p. 147 and note to Table I of this article.

Thus, we find that about 10 per cent of income units in the sample had mortgage debt on owner-occupied houses, and the mean amount outstanding was roughly £750. The mean mortgage per income unit spread over all income units in the sample was £71 in 1953 and £66 in 1954.

The proportion of income units where the house was being purchased by mortgage increases as the level of annual income increases to a maximum in the income range £1,000 to £1,500 a year, where about one-third of income units have mortgage debt ; thereafter this proportion decreases. Apart from an irregularity in the lowest income group, which is clearly due to fluctuations of sampling, the mean amount of outstanding principal also increases as annual gross income rises.

Income units in which the head was a manager show the highest proportion with mortgages—about 25 per cent. The mean amounts outstanding on the mortgages are also highest among this category. About one-fifth of the income units with self-employed heads have mortgages on their houses, but the mean amounts outstanding are substantially less than for managers. Only about 3 income units in every hundred with an unskilled manual worker as head have mortgages. The analysis by age shows that the proportion of income units with mortgages rises up to the 35–44 group, and thereafter declines ; and the mean amounts outstanding follow the same general pattern.

The outstanding feature of the regional analysis is the very small proportion of income units in Scotland with mortgages, which is clearly related to the small number of owner-occupiers noticed earlier. This small proportion, however, has relatively large amounts of mortgage principal outstanding. No particularly noticeable differences emerge when the data are analysed by town size. It appears that slightly fewer income units in rural areas have mortgages than in the towns, and that the largest sums outstanding for mortgages are in ‘ other urban ’ areas.

Since mortgages on owner-occupied houses comprise the bulk of all mortgages covered in the Survey, the distributions and mean amounts of total mortgage outstanding are little different from mortgages on owner-occupied houses shown in Table XVI, and they are therefore not shown separately. The groups mainly affected by the inclusion of property other than owner-occupied dwellings appear to be the wealthier section of the community—the self-employed and managers—and those past middle age. The inclusion of property other than owner-occupied houses results in an increase of £5 in the mean amount of mortgage outstanding for all income units, and the mean amount for those actually with mortgage debt of over £100 rises from about £750 to about £790.

(4) *Liabilities, mortgage debt and gross income*

The average amount of liabilities for all income units in the 1953 Survey came to just over one-fifth of the annual mean gross income of all income

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[1] *Op. cit.*

TABLE XVI. *Mortgage Outstanding on Owner-Occupied Houses* (percentages of income units)

Type of income unit	*Amount of mortgage outstanding*								
	Nil and under £100	*£100–499*	*£500–999*	*£1000–3,000*	*£3,000 and over*	*N.A.*	*Total*	*Mean* (£)	*Mean of those with mortgage on house of £100 and over* (£)
All income units	91	4	3	2	(0.3)	(0.2)	100	*71*	*752*
Gross income									
£0—99	98	—	—	1	—	1	100	*28*	*1,700*
£100—199...	97	1	1	1	—	—	100	*15*	*447*
£200—299...	96	3	—	1	—	—	100	*20*	*467*
£300—399...	91	3	4	2	—	—	100	*49*	*566*
£400—499...	92	3	4	1	—	—	100	*40*	*538*
£500—599...	87	6	4	3	—	—	100	*80*	*616*
£600—699...	86	5	3	6	—	—	100	*101*	*747*
£700—799...	77	9	8	6	—	—	100	*152*	*660*
£800—999...	70	8	8	13	1	—	100	*270*	*912*
£1,000—1,499	66	5	4	22	3	—	100	*522*	*1,515*
£1,500—1,999	77	3	8	10	3	—	100	*410*	*1,778*
£2,000 and over	78	1	3	11	7	—	100	*454*	*2,027*
Occupation of head									
Self-employed	80	5	7	6	1	1	100	*184*	*904*
Managers and technical	75	3	6	15	1	—	100	*314*	*1,236*
Clerical and sales...	90	4	4	2	—	—	100	*66*	*658*
Skilled manual	90	5	3	2	—	—	100	*63*	*615*
Unskilled manual	97	1	2	—	—	—	100	*17*	*581*
Retired and unoccupied	94	3	1	1	—	1	100	*23*	*446*
Age of head									
18—24	99	—	—	1	—	—	100	*8*	*1,100*
25—34	90	2	5	3	—	—	100	*81*	*806*
35—44	84	6	3	6	1	—	100	*142*	*906*
45—54	87	6	5	1	1	—	100	*77*	*598*
55—64	92	2	3	2	1	—	100	*64*	*814*
65 and over	95	3	1	—	—	1	100	*17*	*351*
Region									
Scotland	98	(0.4)	1	1	(0.1)	—	100	*20*	*906*
Northern England	89	5	3	3	—	(0.3)	100	*73*	*651*
Midlands and Wales	90	4	3	3	(0.1)	(0.3)	100	*71*	*691*
South and East England	91	3	3	3	(0.3)	—	100	*82*	*860*
Town Size									
Conurbations	91	4	2	3	(0.1)	(0.4)	100	*61*	*671*
Other urban	89	4	4	3	(0.2)	(0.4)	100	*86*	*807*
Rural	93	3	2	2	(0.1)	—	100	*53*	*753*

units—Table XVII. There are, of course, great variations in this ratio between different types of income units. For instance, on the average liabilities comprise a higher proportion of income at higher levels of income than at lower. The ratio of liabilities to mean gross income is highest among income units in which the head was a manager or self-employed and lowest where the head was an unskilled worker. The ratio at first rises with age, reaching its maximum in the 35–44 range, and thereafter declines.

No clear pattern emerges from the size analysis. There is considerable evidence in Table XVII that liabilities increase in relation to annual income as the number of persons in the income unit increases ; but the ratio declines substantially in income units consisting of 6 or more persons.

The analysis by housing status indicates clearly that it is those income units which own with a mortgage who have very large liabilities in relation to their annual incomes ; while those who rent have financial commitments small in relation to income. For instance, income units owning with a mortgage have on the average total liabilities equivalent to about 15 months' income ; whereas liabilities of those living in council houses are equivalent to only about one month's income. The ratio for those income units owning their houses outright is much higher than for those who rent, but is relatively small when compared with those who have mortgage debt.

In the second column of Table XVII we consider only those income units which actually had some liabilities—about one third of all income units—and a somewhat different picture emerges. In these cases on the average their liabilities came to about 56 per cent of their mean gross incomes, *i.e.* their liabilities amounted to slightly more than six months' income. We find that in several types of income unit liabilities amounted to about one year's income ; of the retired and unoccupied the liabilities of those income units actually with liabilities amounted to one year's income—a very different picture from that which emerged when all income units where the head was in this occupational category were considered ; this feature may also partly account for the high ratio between liabilities and gross income in the lowest income ranges. When we consider only those income units having liabilities, we also find that the ratio between their liabilities and their gross income rises up to the age range 55–64, whereas when we considered all income units we found that the ratio reached its maximum in the 35–44 groups.

The average annual gross income of those income units with liabilities is substantially higher than that of income units without liabilities, and this holds for all types of income units shown in Table XVII. The mean gross income of all income units in the 1953 Survey was £434 ; while the mean gross income of those units with some liabilities was £547. We have also seen earlier that the proportion of income units having liabilities, and the mean amounts of liabilities, increase with income. Thus, it appears that in the lower income ranges many income units either do not incur debt, or else incur only small amounts, because their incomes do not provide a suffi-

TABLE XVII. *Liabilities and Gross Income*

Type of income unit	*Mean liabilities as percentage of mean gross income*	*Mean liabilities of those with liabilities as percentage of their mean gross income*
All income units	22	56
Gross income		
£0—99	18	246
£100—199	13	114
£200—299	10	53
£300—399	16	60
£400—499	11	27
£500—599	19	40
£600—699	20	43
£700—799	31	67
£800—999	39	72
£1,000—1,499	56	123
£1,500—1,999	29	55
£2,000 and over	34	82
Occupation of head		
Self-employed	37	81
Managers and technical	43	101
Clerical and sales	23	57
Skilled manual	17	38
Unskilled manual	7	20
Retired and unoccupied	14	99
Age of head		
18—24	4	20
25—34	22	45
35—44	30	58
45—54	24	62
55—64	21	73
65 and over	10	54
Region		
Scotland	20	72
Northern England	24	55
Midlands and Wales	22	53
S. and E. England	22	55
Town Size		
Conurbations	18	46
Other urban	28	67
Rural	16	47
Number of persons		
One	9	51
Two	20	58
Three	30	67
Four	26	44
Five	43	75
Six and over	13	25
Housing status		
Owns outright	14	68
Owns with mortgage	122	118
Rents—Council	3	7
Rents—unfurnished	3	10
Rents—furnished	1	5
Rent free	4	16
Secondary I.U.s	4	19
Liquid Assets		
Nil	N.A.	33
£1—49	N.A.	50
£50—99	N.A.	66
£100—199	N.A.	68
£200—399	N.A.	67
£400—599	N.A.	87
£600—799	N.A.	63
£800—999	N.A.	50
£1,000—1,499	N.A.	39
£1,500—1,999	N.A.	70
£2,000 and over	N.A.	128

cient margin above current needs to service the debt. The ability to make larger repayments on debt accounts to a large extent for the greater frequency of debts as the amount of income increases.[1]

The mean gross income of those with liabilities rises fairly steadily with their liquid asset holdings ; but the pattern of the amounts of their liabilities and liquid assets is not so clearly defined. Those income units with liabilities, but with no liquid assets, had the lowest level of annual gross income and also the smallest amount of liabilities. The mean amount of liabilities tends to increase with liquid assets up to liquid asset levels of about £600 ; then liabilities decline, but rise again at the highest levels of liquid asset holdings. In general, the relation between liabilities and assets seems to be explained in part by a fairly frequent resort to debt in order to acquire assets, and in part to a greater ability to borrow when acceptable security is available.

Table XVIII

Mortgage Debt and Gross Income

Gross Income	*Mean amounts of mortgage outstanding of those with a mortgage on own house as percentage of mean gross income*
£0—99	2,073
£100—199	306
£200—299	186
£300—399	161
£400—499	121
£500—599	113
£600—699	115
£700—799	89
£800—999	105
£1,000—1,499	132
£1,500—1,999	108
£2,000 and over	56

In Table XVIII is shown the relationship between gross income and the mean amount of mortgage outstanding of those income units actually with mortgage debt on their own home. Over all income units the mortgage outstanding was equivalent to about a year and three-quarters' mean gross income. In the case of the lower income groups, it was equivalent on the average to more than two years' income ; thereafter as income rises the ratio between gross income and mortgage debt falls until we reach those income units with an annual income of between £700 and £800. Above this income range there appears to be a tendency for the ratio to rise again, and then fall to a relatively low figure for incomes of over £2,000 a year. This tendency probably reflects the purchase of more expensive types of houses by the higher income groups, and the consequent larger amounts of mortgage debt outstanding in these cases, which has already been observed.

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[1] The same point has been made in the findings of the *U.S. Survey of Consumer Finances*. See, for instance Part V, page 79, of the 1950 *Survey of Consumer Finances*, issued by the Board of Governors of the Federal Reserve System, Washington.

(5) *Mortgage debt and value of house*

Some 10 per cent of the income units in the 1953 Survey were buying a house by means of a mortgage. In Table XIX we show the relationship between their valuations of their houses and the amounts of mortgage principal outstanding. The mean value of the houses of those with mortgage debt was £1,892, while the mean value of the house in the case of those owning outright was £1,718. Thus, those income units with a mortgage valued their houses on average at about £175 more than those owning outright. These figures seem to accord well enough since the houses of those owning with a mortgage are likely to be newer properties than the houses of those owning outright. There may also be a psychological factor at work since it is possible that people who are paying off a mortgage on their house may well put a higher value on it than those who have paid off the mortgage and own outright.

TABLE XIX

Mortgage Debt on Owner-occupied Houses and Value of Houses

Mean amount of mortgage outstanding of those with mortgage debt of over £100 as percentage of the mean value of their houses

All income units	39.7
Gross income	
£0—99	85.0
£100—199	33.7
£200—299	30.5
£300—399	40.8
£400—499	42.4
£500—599	37.6
£600—699	39.3
£700—799	34.7
£800—999	39.9
£1,000—1.499	43.7
£1,500—1,999	53.5
£2,000 and over	40.2
Occupation of Head	
Self-employed	46.3
Managers and technical	41.6
Clerical and sales	37.2
Skilled manual	44.2
Unskilled manual	30.1
Retired and unoccupied	25.5

Age of Head	
18—24	73.3
25—34	50.0
35—44	47.4
45—54	33.1
55—64	31.6
65 and over	19.6
Region	
Scotland	45.1
Northern England	41.3
Midlands and Wales	35.0
South and East England	41.2
Town size	
Conurbations	33.6
Other urban	41.3
Rural	53.4

The mean amount of mortgage outstanding for those income units with a mortgage was £752, and was thus on average about 40 per cent of the mean value of the houses. No clear pattern emerges when the relationship is analysed by gross income groups, but there is perhaps a tendency for the mean amount outstanding to be a larger proportion of the value of the houses at high incomes than at lower incomes.

As one would expect, the amount of mortgage outstanding is a smaller proportion of the value of the house for those income units where the head is retired and unoccupied than for any other occupational category. It is also a noticeably smaller proportion in the case of unskilled manual workers ;

the reason for this is not clear, but it may well arise from the difficulty of persons with relatively low incomes in raising large mortgages, or it may be due simply to a tendency to overvaluation of the houses.

The ratio between the amount of mortgage outstanding and the value of the house is, of course, inversely related to the age of the head of the income unit; falling from nearly 75 per cent in the lowest age group to about 20 per cent in income units where the head was 65 and over. The ratio appears to be considerably lower in the Midlands and Wales than in other areas, and this may well reflect a proportionately greater rise in the value of the houses in the Midlands in recent years than in other areas. It is also noticeably smaller in conurbations, and this arises from a markedly lower mean amount of mortgage outstanding.

(6) *Hire purchase outstanding*

The second type of liability about which information was collected in the Survey was hire purchase outstanding ; and the results are tabulated in Table XX. Although on the average the amount of hire purchase debt per income unit is quite small (£6 in 1953 and £7 in 1954), it is the most commonly occurring form of debt. The proportion of income units actually having some hire purchase debt was 21 per cent in 1953 (it rose slightly to 25 per cent in 1954), and the average amount owed by these income units was £27 (£28 in 1954).

The proportion of income units with hire purchase debt rises as gross income increases and appears to reach a maximum of about one-third at income levels between £400 and £800. The mean amounts of debt, however, are highest at income levels above £600.

Hire purchase debt is most commonly found in income units where the head is a manual worker—about 30 per cent of them have this form of debt—and least often where the head is retired and unoccupied. However, the mean amounts of debt outstanding, for those actually with hire purchase, are higher among the self-employed and managers than in the other occupational classifications.

The age analysis shows that it is in the range 25–34 that the proportion of income units with hire purchase debt is at its maximum ; thereafter there is a fairly steady fall in the proportion as age increases. The mean amounts outstanding, however, continue to increase up to the age range 35–44, and thereafter decline. There is a very noticeable pattern in the age analysis of the frequency of hire purchase debts, and it seems quite clear that this form of debt is closely associated with the setting up of new households and the growth of families.

The next section of Table XX analyses hire purchase debt in relation to liquid assets, and indicates clearly that this form of debt is most frequently found at low liquid asset levels below £100.[1]

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[1] For a more detailed account of this point see L. R. Klein, Major Consumer Expenditures and Ownership of Durable Goods. BULLETIN, Vol. 17, No. 4, Nov. 1955.

Income units renting their accommodation incur hire purchase debt more frequently than those with other types of housing status, and this is especially true of those renting council houses. One-third of the latter had hire purchase debts in 1953 ; moreover, the mean amount outstanding (£32) was the highest of all types of housing status, apart from those who owned their houses outright.

As the number of persons per unit increases the proportion of income units with hire purchase debt rises. Thus only 9 per cent of single person income units had this form of debt, whereas 46 per cent of six person and over income units were using hire purchase.

The analyses of hire purchase debt by region and size of town in the two sections at the bottom of Table XX do not show any major differences in the distributions or mean amounts between the regions or different town sizes. A somewhat smaller proportion of income units in Scotland appear to have this type of debt, and a slightly larger proportion in the north of England, while such commitments are not quite so commonly found in rural areas as in towns.

(7) *Hire purchase repayments*

The amounts of hire purchase repayments as distinct from amounts outstanding are not strictly relevant to a study of net worth, except in so far as they serve to indicate the time period of such debts ; and this section must be regarded as something of a digression. No analysis of annual hire purchase repayments has been done from the 1953 Survey. However, about one-fifth of the income units in the 1953 sample were re-interviewed approximately one year later in 1954, and data on hire purchase repayments have been taken off the re-interview schedules. Since this is new and topical material it is worth while to present it here.

A word of warning should be given. Enough analysis of the re-interview sample has not yet been completed fully to indicate its reliability. There will be greater sampling errors in the re-interview information than in the data from the complete 1953 Survey ; this will be so especially where we refer to very small sectors of the population, for instance the number of income units in the higher income groups or those with large amounts of liquid assets, and it may well be that the re-interview sample is too small to provide a reasonable representation in such cases.

The data on hire purchase repayments taken from these re-interviews are given in Table XXI, together with the relationship between the mean amounts of annual repayment and the mean net income of the income units making these repayments. The mean amount of annual hire purchase repayments was £31 for those income units actually making such payments —some £4 more than the mean amount of hire purchase outstanding for income units with such debts at the time of the 1953 Survey (Table XX). The mean amount of hire purchase repayment was about 6 per cent of the estimated mean net income in 1953–54 ; but this ratio varies considerably

TABLE XX *Hire Purchase Outstanding*
(percentages of income units)

Type of income unit	*Hire purchase outstanding*						*Mean*	*Mean of those with H.P.*
	Nil	*£1–9*	*£10–19*	*£20–49*	*£50 and over*	*Total*	(£)	(£)
All income units	79	7	5	6	3	100	*6*	*27*
Gross income								
£0—99	97	3	—	—	—	100	—	*4*
£100—199	94	2	3	1	—	100	*1*	*12*
£200—299	85	9	3	2	1	100	*2*	*14*
£300—399	82	8	2	6	2	100	*4*	*22*
£400—499	65	9	9	12	5	100	*9*	*27*
£500—599	67	11	7	9	6	100	*10*	*29*
£600—699	65	6	9	12	8	100	*13*	*39*
£700—799	69	6	7	12	6	100	*11*	*35*
£800—999	73	4	6	8	9	100	*10*	*36*
£1,000—1,499	84	3	2	5	6	100	*5*	*31*
£1,500—1,999	81	—	—	16	3	100	*6*	*33*
£2,000 and over	93	—	3	—	4	100	*12*	*162*
Occupation of head								
Self-employed	83	2	3	6	5	100	*8*	*47*
Managers and technical	87	2	3	5	3	100	*5*	*40*
Clerical and sales	80	4	7	5	4	100	*6*	*27*
Skilled manual	70	9	6	10	5	100	*9*	*29*
Unskilled manual	72	12	4	9	3	100	*6*	*22*
Retired and unoccupied	93	3	2	1	1	100	*1*	*14*
Age of head								
18—24	87	5	2	5	1	100	*3*	*23*
25—34	66	11	4	14	5	100	*9*	*27*
35—44	71	6	9	9	5	100	*9*	*31*
45—54	75	10	6	5	4	100	*7*	*28*
55—64	85	5	4	4	2	100	*3*	*20*
65 and over	93	3	2	1	1	100	*1*	*22*

Type of income unit	*Hire Purchase Outstanding*						*Mean*	*Mean of those with H.P.*
	Nil	*£1–9*	*£10–19*	*£20–49*	*£50 and over*	*Total*	*(£)*	*(£)*
Liquid Assets								
Nil ...	78	9	5	5	3	100	*5*	*22*
£1—49 ...	70	9	6	10	5	100	*9*	*30*
£50—99 ...	71	6	6	12	5	100	*10*	*35*
£100—199 ...	86	3	4	4	3	100	*4*	*28*
£200—399 ...	87	3	3	5	2	100	*4*	*30*
£400—599 ...	94	(0.3)	2	2	2	100	*2*	*30*
£600—799 ...	93	3	—	4	—	100	*1*	*12*
£800—999 ...	87	6	6	—	1	100	*2*	*19*
£1,000—1,499 ...	93	5	2	—	—	100	*1*	*8*
£1,500—1,999 ...	100	—	—	—	—	100	—	—
£2,000 and over ...	95	—	3	1	1	100	*2*	*30*
Housing Status								
Owns outright ...	88	4	2	2	4	100	*5*	*40*
Owns with mortgage ...	82	4	5	6	3	100	*5*	*27*
Rents—Council ...	67	8	6	12	7	100	*11*	*32*
Rents—other unfurnished ...	74	8	7	8	3	100	*7*	*25*
Rents—furnished ...	76	6	12	6	—	100	*4*	*18*
Rent free ...	84	5	3	7	1	100	*4*	*23*
All Primary I.U.'s ...	76	7	6	7	4	100	*7*	*28*
Secondary I.U.'s ...	88	5	2	4	1	100	*3*	*24*
Number of Persons								
One ...	91	4	2	2	1	100	*2*	*21*
Two ...	80	6	4	6	4	100	*6*	*30*
Three...	74	7	8	8	3	100	*7*	*25*
Four ...	61	11	7	15	6	100	*12*	*31*
Five ...	60	15	11	9	5	100	*9*	*23*
Six and over...	54	15	8	14	9	100	*13*	*30*
Region								
Scotland ...	85	6	3	4	2	100	*4*	*26*
Northern England ...	75	8	6	8	3	100	*6*	*25*
Midlands and Wales ...	79	7	5	6	3	100	*6*	*29*
South and East England ...	79	5	5	7	4	100	*6*	*28*
Town Size								
Conurbations ...	78	6	5	8	3	100	*6*	*26*
Other urban ...	79	7	4	6	4	100	*6*	*29*
Rural... ...	81	8	4	5	2	100	*5*	*25*

between income units of different types. The mean amount of annual repayments increases up to gross income levels of between £400 and £600, and the proportion of net income spent on hire purchase repayments also reaches its maximum within this range of gross income. Thereafter, the repayments appear to decline both absolutely and relatively to net income, until gross income reaches £1,500 a year. In the gross income group above £1,500 a

TABLE XXI

Mean Amounts of Annual Hire Purchase Repayments and Net Income
(Based on 1954 re-interview sample)

Type of income unit	*Mean amount of annual hire purchase repayments 1953–54* (£)	*Mean net income 1953–54* (£)	*Mean amount of hire purchase repayments as percentage of mean net income*
All income units	31	516	6.0
Gross income			
£0—99	—	81	—
£100—199	8	153	5.2
£200—299	11	261	4.2
£300—399	24	337	7.1
£400—599	41	484	8.5
£600—999	28	647	4.3
£1,000—1,499	27	1,002	2.7
£1,500—and over	102	1,946	5.2
Occupation of Head			
Self-employed	57	864	6.6
Managers and technical	19	769	2.5
Clerical and sales	39	464	8·4
Skilled manual	37	533	6.9
Unskilled manual	15	482	3.1
Retired and unoccupied	9	193	4.7
Age of Head			
18—24	158	435	36.3
25—34	37	518	7.1
35—44	15	618	2.6
45—54	24	525	4.6
55—64	17	396	4.3
65 and over	6	391	1.5
Liquid Assets			
Nil	42	464	9.1
£1—49	27	520	5.2
£50—199...	27	565	4.8
£200—599	21	592	3.5
£600—999	20	892	2.2
£1,000—1,999	8	921	0.9
£2,000 and over	23	155	14.8
Housing Status			
Owns outright	24	425	5.6
Owns with mortgage	23	598	3.8
Rents—Council	18	522	3.4
Rents—other unfurnished	25	492	5.1
Rents—furnished	33	853	3.9
Rent free	17	592	2.9
Secondary income units	100	520	19.2

year the mean amount of annual repayments on hire purchase was over three times the mean for the whole sample, and these repayments amounted to a little over 5 per cent of the mean net income. It is worth emphasising here that the sampling error in this group is probably fairly large ; on the other hand one obtains some confidence that the findings are not too far out by looking at Table XX, which shows that the mean amount of hire purchase outstanding of those with hire purchase in the gross income group £2,000 and over in the main 1953 sample—£162—is larger than the mean amount of annual repayments for the income group £1,500 and over in Table XXI.

Annual hire purchase repayments are highest among the self-employed and lowest among the retired and unoccupied and unskilled workers. Relatively to mean net income, however, those income units in which the head is in the clerical and sales group or is a skilled manual worker have the largest hire purchase repayments.

The re-interview data indicate that, if we exclude the lowest age group, amounts of annual repayment of hire purchase debt are highest among those in the 25–34 age group ; and in this group also the repayments form a higher proportion of mean net income than in any other. This would seem to provide further evidence for the point made earlier that hire purchase is most commonly found among income units in this group and is associated with the setting up of new homes. The very large amount of repayments, together with the high ratio between repayments and net income in the lowest age group arises from sampling fluctuations.[1]

When annual hire purchase repayments are analysed by liquid assets much the same pattern emerges as was found for hire purchase outstanding—the mean amounts of repayment tend to be higher, and constitute a larger proportion of mean net income, at low liquid asset levels than at higher levels. The low mean net income and the high ratio between income and hire purchase repayments in the highest liquid asset group can be ascribed to sampling fluctuations.

The final section of Table XXI shows hire purchase repayments by the housing status of the income unit. Apart from secondaries, we find that the mean annual amounts of repayments are highest among those who are renting furnished or unfurnished accommodation, and lowest among those living rent free or renting council houses. The highest ratio between repayments and mean net income is found among those owning their houses outright. Such units in the re-interview sample had a lower mean net income than any other housing status group. We found in the 1953 Survey analysis of hire purchase outstanding that only a small proportion of outright owners have hire purchase debt ; that the average amount outstanding is relatively small, but that the mean amount of those actually with some hire purchase debt is large. The conclusion seems to be that among those owning their houses outright it is those with relatively low incomes who have large amounts of hire purchase outstanding ; and who are making large repayments.

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[1] Many of the income units in this age range are secondaries and the mean amounts of repayments of secondaries are high (Table XXI). The number of secondaries in the re-interview sample is quite small, and probably they do not form a fair representation. The large figures arise from income units in which the head was a skilled manual worker or in the clerical and sales group, and in all cases the hire purchase repayments are in respect of motor cars, and the mean amounts being repaid amount to a very large proportion of the mean annual income. This would seem quite a feasible situation in a secondary income unit which so often consists of a working child living at home with his parents.

The data from the re-interview sample indicate that those units making hire purchase repayments have a higher mean net income than those with no hire purchase debt.[2] The mean net income of all income units was £392 in the 1953 Survey ; £437 in the 1954 re-interview sample, and £516 for those actually with hire purchase repayments in the re-interview sample. This higher level of net income for those making repayments is found for almost all the types of income unit shown in Table XXI.

On the average, hire purchase debt seems to be repaid by income units in just over one year ; but some fairly clear exceptions to this average figure are provided by income units in which the head was a manager and by those living in council houses. In these cases the period of repayment seems to be nearer two years than one year. On the other hand those renting furnished accommodation and those income units in which the head was in the clerical and sales group or was a skilled manual worker seem to pay off the debt in a somewhat shorter period.

(8) *Bank overdrafts*

Our last component on the liabilities side of the net worth account consists of overdrafts (Table XXII). Less than one per cent of all income units in the sample had an overdraft, and thus the sampling errors of the items, and especially of the mean amounts in Table XXII, will probably be very large. The average amount of overdraft for all income units in the sample was about £6. It can be seen from the first column of Table XXII that income units with overdrafts are mostly found in income groups over £1,000 a year. The self-employed and managers have overdrafts more frequently than persons in other occupations, and the commonest age range in which overdrafts are found is where the head of the income unit is between 35 and 54 years of age.

It is of more interest to confine the analysis to those income units having a bank account. We find that some 18 per cent of sample income units actually had a bank account, and that 4.4 per cent of those with bank accounts had overdrafts, the mean amount of their overdrafts being about £770. Since this mean is based on a very small number of cases the warning at the beginning of this section must be remembered. This figure is very tentative, but this is what emerged from the statistical processing and we present it for what it is worth. In general, the proportion of income units having bank accounts, the proportion of those with overdrafts and the mean amounts of these overdrafts, all rise with income.

[2] This point has been observed elsewhere. See L. R. Klein, *Patterns of Savings. The Surveys of 1953 and 1954.* BULLETIN, Vol. 17, No. 2, May, 1955.

TABLE XXII

Overdrafts

Type of income unit	*Percentage of income units with overdraft*	*Mean amount of overdraft* (£)	*Percentage with Bank Account*	*Percentage of those with Bank accounts having overdrafts*	*Mean of those with overdraft* (£)
All income units	0.8	*6*	18.1	4.4	*766*
Gross income					
£0—499	0.3	*1*	11.4	2.6	*342*
£500—999	1.0	*3*	27.8	3.5	*363*
£1,000—1,999	6.3	*76*	77.6	8.1	*1,208*
£2,000 and over	16.4	*256*	79.1	20.8	*1,557*
Occupation of Head					
Self-employed	5.7	*57*	41.7	13.7	*1,059*
Managers and technical ...	3.4	*31*	70.5	4.8	*898*
Clerical and sales	0.6	*5*	20.6	2.9	*778*
Skilled manual	0.5	*1*	10.1	5.0	*237*
Unskilled manual	—	—	6.0	—	—
Retired and unoccupied ...	0.5	*1*	16.5	3.0	*276*
Age of Head					
18—24	—	—	3.0	—	—
25—34	0.2	*3*	18.9	4.8	*1,177*
35—44	1.6	*10*			*672*
45—54	1.2	*11*	22.3	4.5	*961*
55—64	0.8	*6*			*770*
65 and over	0.5	*3*	18.1	2.8	*480*

Bank accounts are much more frequent among managers than any other occupational category. Over two-thirds of the income units where the head was a manager had bank accounts and of these a little over 5 per cent had an overdraft, their average overdraft being nearly £900. The self-employed appear to have personal bank accounts less frequently than the managers, but they have overdrafts about three times as often and their overdrafts are larger in amount. In interpreting the figures for the self-employed the reader must bear in mind the fact that accounts which were maintained either wholly or partially for business purposes are not included in the personal assets of the self-employed. Bank accounts are much less frequent among manual workers than those in other occupations. Only about one-fifth of income units in which the head was in the clerical and sales classification had bank accounts, and only 3 per cent of these had an overdraft ; the amount of overdraft in these cases, however, was relatively large.

(9) *Summary of liabilities*

A fairly clear pattern emerges from the analysis of the liabilities of income units. As we have seen mortgage debt on owner-occupied houses forms much the largest proportion of total debt, and results in a very heavy concentration of debt in those income units purchasing their houses with a mortgage. Thus, about 80 per cent of the total amount of liabilities of all income units concentrated in the 10 per cent with a mortgage—Table XXIII. A further 11 per cent of total debt is found in income units who own their houses outright: and thus we can say that about four-fifths of income units not owning their own houses, are responsible for only about 10 per cent of total liabilities.

Furthermore, liabilities are heavily concentrated in income units in which the head was either self-employed or in the managerial group; the 12 per

TABLE XXIII

The Distribution of the Total Amount of Liabilities

Type of income unit	*Percentage of income units*	*Percentage with liabilities*	*Percentage of total liabilities*
All income units	*100*	*31*	*100*
Gross income			
£0—99	*5.4*	*8*	0.7
£100—199	*17.3*	*11*	3.3
£200—299	*13.7*	*20*	3.7
£300—399	*17.0*	*28*	10.4
£400—499	*16.5*	*41*	8.6
£500—599	*12.2*	*48*	13.4
£600—699	*7.8*	*47*	10.7
£700—799	*2.9*	*47*	7.0
£800—999	*3.9*	*54*	13.8
£1,000—1,499	*2.1*	*45*	13.9
£1,500—1,999	*0.5*	*53*	2.5
£2,000 and over	*0.9*	*42*	11.9
Occupation of head			
Self-employed	*4.4*	*40*	14.0
Managers and technical	*7.3*	*40*	31.8
Clerical and sales	*13.9*	*31*	13.6
Skilled manual	*34.7*	*40*	29.4
Unskilled manual	*17.0*	*33*	4.9
Retired and unoccupied	*22.8*	*12*	6.3
Age of head			
18—24	*10.7*	*15*	1.2
25—34	*18.0*	*44*	20.3
35—44	*20.3*	*46*	36.6
45—54	*17.9*	*36*	25.6
55—64	*13.2*	*26*	11.8
65 and over	*19.9*	*12*	4.5
Number of persons			
One	*36.2*	*13*	7.6
Two	*27.0*	*32*	28.1
Three	*15.7*	*43*	28.1
Four	*12.6*	*53*	20.0
Five	*5.2*	*51*	13.5
Six and over	*3.3*	*49*	2.7
Housing status			
Owns outright	*11.1*	*17*	10.2
Owns with mortgage	*10.0*	*98*	79.5
Rents—Council	*14.3*	*34*	1.7
Rents—other unfurnished	*37.1*	*28*	5.5
Rents—other furnished	*1.4*	*27*	0.1
Rent free	*3.4*	*21*	0.6
Secondary income units	*22.7*	*14*	2.4

TABLE XXIV

Distribution of Total Amount of Hire Purchase Outstanding

Type of income unit	*Percentage of income units*	*Percentage with hire purchase outstanding*	*Percentage of total amount of hire purchase outstanding*
All income units	*100*	*21*	100
Gross income			
£0—99	*5.4*	*3*	0.1
£100—199	*17.3*	*6*	2.3
£200—299	*13.7*	*15*	4.9
£300—399	*17.0*	*18*	11.5
£400—499	*16.5*	*35*	26.5
£500—599	*12.2*	*33*	20.3
£600—699	*7.8*	*35*	18.2
£700—799	*2.9*	*31*	5.3
£800—999	*3.9*	*27*	6.6
£1,000—1,499	*2.1*	*16*	1.8
£1,500—1,999	*0.5*	*19*	0.6
£2,000 and over	*0.9*	*7*	1.9
Occupation of head			
Self-employed	*4.4*	*17*	6.0
Managers and technical	*7.3*	*13*	6.5
Clerical and sales	*13.9*	*20*	13.1
Skilled manual	*34.7*	*30*	53.6
Unskilled manual	*17.0*	*28*	17.2
Retired and unoccupied	*22.8*	*7*	3.5
Age of head			
18—24	*10.7*	*13*	5.7
25—34	*18.0*	*34*	28.5
35—44	*20.3*	*29*	32.4
45—54	*17.9*	*25*	21.4
55—64	*13.2*	*15*	6.9
65 and over	*19.9*	*7*	5.1
Liquid Assets			
Nil	*33.1*	*22*	26.7
£1—49	*26.3*	*30*	40.2
£50—99	*9.5*	*29*	16.9
£100—199	*11.3*	*14*	7.8
£200—399	*8.0*	*13*	5.5
£400—599	*4.1*	*6*	1.4
£600—799	*2.1*	*7*	0.3
£800—999	*1.3*	*13*	0.5
£1,000—1,499	*1.6*	*7*	0.2
£1,500—1,999	*0.6*	—	—
£2,000 and over	*2.1*	*5*	0.5
Housing status			
Owns outright	*11.1*	*12*	9.2
Owns with mortgage	*10.0*	*18*	8.5
Rents—Council	*14.3*	*33*	26.1
Rents—other unfurnished	*37.1*	*26*	41.7
Rents—furnished	*1.4*	*24*	1.1
Rent free	*3.4*	*16*	2.2
Secondary income units	*22.7*	*12*	11.2
Number of persons			
One	*36.2*	*9*	11.5
Two	*27.0*	*20*	28.1
Three	*15.7*	*26*	18.2
Four	*12.6*	*39*	25.8
Five	*5.2*	*40*	8.4
Six and over	*3.3*	*46*	8.0

cent of such income units accounted for about 46 per cent of the total amount of liabilities. The age analysis shows that income units in which the head was between 35 and 44 had much the largest share of total liabilities. About 7½ per cent of income units with an annual gross income of over £800 had incurred some 42 per cent of the total amount of liabilities of all sample income units.

Overdrafts are much more uncommon than any other form of debt, as we have shown, but they tend to be concentrated in much the same type of income unit as mortgages—the higher income groups, the self-employed and managers, and the middle age ranges.

Hire purchase debt is more commonly found than either mortgage debt or overdrafts, but it is concentrated to a large extent in different types of income units from those with mortgage debt and overdrafts. From Table XXIV in which we show the distribution of the total amount of hire purchase outstanding, it can be seen that about 70 per cent of the total was owed by income units in which the head was a manual worker ; that over three-quarters of it was concentrated in income units with an annual gross income of between £300 and £700, and that the 3.5 per cent of income units with an income of over £1,000 per annum had only 4.3 per cent of the total amount of hire purchase outstanding. The point made earlier about the use of hire purchase by income units with small amounts of liquid assets is further substantiated by the data in Table XXIV, which shows that the 36 per cent of income units with liquid assets of between £1 and £100 owed about 57 per cent of the total amount of hire purchase outstanding. Furthermore, about two-thirds of the total was owed by income units renting their accommodation, and over one-quarter of the total had been incurred by the 14 per cent of income units renting council houses.

We do find, however, the largest proportions of hire purchase debt outstanding concentrated in much the same age groups as in the case of mortgages, and this again appears to be related to the use of hire purchase when new households are established and families are being raised.

V. A Comparison with the United States

In Table XXV are presented some comparisons of the relationship between net worth and gross income in the United States and Great Britain. International comparisons of this nature can often be misleading and sometimes dangerous. In this case too much attention should not be paid to any particular pair of figures, but we think that the broad pattern which emerges in the comparison between the two countries is probably fairly reliable.

There are several major differences in definition which should be noted.[1] Firstly, the American statistics are collected by personal interviews with about 3,000 ‘ spending units ’, these ‘ units ’ being groups of people living

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[1] For a more detailed account of the comparison of the British and American Survey data see : L. R. Klein, British and American Consumers—A Comparison of their Situations and Finances. *The Bankers' Magazine*, No. 1332, March 1955.

Table XXV

Net Worth and Money Income—United States and Great Britain
1952–53

Type of income unit	**United States**		**Great Britain**	
	Percentage of spending units	*Net worth early 1953 as percentage of 1952 income before taxes*	*Percentage of income units*	*Mean net worth 1952–3 as percentage of 1952-3 mean gross income*
All units	100	*293*	100	*185*
Age of head of unit				
18—24	9	*49*	11	*14*
25—34	23	*129*	18	*67*
35—44	21	*219*	20	*132*
45—54	18	*346*	18	*205*
55—64	13	*495*	13	*293*
65 and over	13	*768*	20	*491*
N.A.	3	—	—	—
Occupation[1] of head of unit				
Self-employed	15	*878*	4	*522*
Professional and semi-professional	8	*225*	—	—
Managerial	5	*180*	7	*263*
Clerical and sales	12	*171*	14	*98*
Skilled and semi-skilled	29	*127*	35	*64*
Unskilled and service	13	*110*	17	*42*
Retired and other	18	*532*	23	*615*
U.S. 1952 money income before taxes				
Under $1,000	11	*1,756*	...	...
$1,000—1,999	14	*468*	...	...
$2,000—2,999	16	*234*	...	...
$3,000—3,999	18	*215*	...	...
$4,000—4,999	15	*183*	...	...
$5,000—7,499	17	*211*	...	...
$7,500 and over	9	*408*	...	...
G.B. Gross income 1953				
£0—99	...	...	5	*471*
£100—199	...	...	17	*263*
£200—299	...	...	14	*142*
£300—399	...	...	17	*93*
£400—499	...	...	16	*94*
£500—599	...	...	12	*103*
£600—699	...	...	8	*136*
£700—799	...	...	3	*185*
£800—999	...	...	4	*246*
£1,000—1,499	...	...	2	*330*
£1,500—1,999	...	...	(0.5)	*578*
£2,000 and over	...	...	1	*582*

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[1] It should be observed that the occupational categories used are not identical in the two countries. In the United States, for instance, the group 'professional and semi-professional' is differentiated, while in the United Kingdom this group is distributed between the self-employed and managerial. The 'other' group combined with the retired covers a wider range than the 'Retired and Unoccupied' in the Savings Survey occupational category in Great Britain. This 'other' sector in the United States definitions includes 'spending units headed by housewives, unemployed persons, students, protective service workers, or persons whose occupations were not ascertained'. But for the very broad comparisons made the differences in the occupational categories between the two countries do not seem likely to be large enough to lead to false conclusions.

in the same dwelling and related by blood, marriage, or adoption, and pooling their incomes. The Savings Survey statistics in Great Britain are collected by personal interview with about 2,500 ' income units ',[1] the latter being defined as single persons aged 18 and over,[2] or married couples together with their children under 18 years of age. The main effect is to produce distributions with more finely divided units in the British than in the American Surveys. Thus many income units in the lowest age group (18–24) in the British Survey consist merely of single persons, frequently working children living at home with their parents. Most of these single-person income units, although they may be financially independent, would not form separate spending units in the American Surveys, since their incomes tend to be pooled with that of the head of the household for major items of expense ; we, therefore, expect the proportion of income units in the lowest age groups in Great Britain to be larger than the corresponding proportion of spending units in the United States. According to the Bureau of the Census, American families contained an average of 3.3 persons ; the average spending unit in the Surveys of Consumer Finances contained 2.9 persons. On the basis of Savings Survey data a household in the United Kingdom (excluding boarders) consisted of 3.1 persons, and the income ' unit ' of the Savings Surveys had an average of 2.3 persons.

Secondly, the definitions of occupations are not the same in the two Surveys. For some types of comparison this difference would be serious, but for our purposes it is not thought that it is important enough to nullify the very general conclusions reached. Probably the main difference concerns the self-employed. The United States Surveys distinguish separately a ' professional and semi-professional ' occupation which is included either in the self-employed or in the managerial groups in the British Surveys. Part of this ' professional and semi-professional ' group in the United States consists of self-employed professional people such as doctors, lawyers, accountants, etc., so that the proportions of self-employed and managerial categories in the United States in Table XXV are low when compared with the British figures. The general result of this appears to be to increase the ratio of net worth to gross income for the self-employed in the United States, since the self-employed professionals are not likely to have such a high ratio of net worth to income as other self-employed persons. A further difference in the occupational classifications occurs in the group ' retired and other ' and is commented upon in the note to Table XXV.

Thirdly, there are two differences in the definition of income. In contrast with our definition the United States Surveys do not include imputed rent and income in kind of farmers.

Finally, the definitions of net worth itself, and in one case the method of valuation, are not identical in the two countries, but the differences are not likely to affect seriously our present comparison. For instance, the American concept used in their Survey of Consumer Finances excludes the holdings of bonds—as distinct from stocks—of corporations and of state, local and foreign governments, whereas the British Surveys include such bonds, where applicable. In the 1953 Survey of Consumer Finances the value of all asset items, except motor-cars, and of all liabilities were ' reported directly by respondents ', which provides—apart from motor-cars—an exact correspondence with the methods used in the Savings Surveys in Great Britain, *i.e.* subjective valuation. In the case of motor-cars the method of valuation in the British Survey is also subjective, whereas in the 1953 Survey of Consumer Finances the value of 1952 model cars was considered equal to the purchase price reported in the interview. All other cars were assigned values based on the make and model year, the values being obtained from a standard rating book. It does not seem likely that the different methods of valuation of cars used in the two countries will upset the comparison to any serious degree. In the United States Surveys it was thought that there was some understatement of the value of assets by respondents, and that, together with the incomplete coverage of assets, would lead to an understatement of the actual personal capital of nearly all spending units. The same points were made earlier in this article in relation to the Savings Surveys' estimate of net worth in Great Britain.

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[1] The relatively low response rate in the 1953 Savings Survey reduced the coverage in that year to 2,100 income units.

[2] Income units with an income of less than £50 were amalgamated at the editing stage with that of the head of the household ; however, in one or two cases, where income was less than £50, but where there were substantial assets, it was decided not to amalgamate.

One further point should be observed. The average age of Americans is lower than that of the British population. In Great Britain, for instance, about 16 per cent of the people are over 60 years of age, whereas the corresponding figure in the United States is only 12 per cent, so that we find a much higher proportion of retired people in Great Britain than in the United States. This again affects any comparison on the basis of income units and spending units, since a proportion of the secondary income units in the Savings Surveys will be old people living with relatives, and such units would not form separate spending units in the American Surveys. Since older people tend to earn lower incomes and buy fewer durable goods, and since they also save little and frequently draw upon past savings, the maturity of the population in Great Britain is significant in the net worth comparisons.

We find much the same pattern for the ratio between net worth and gross income in the two countries—Table XXV. The ratio increases with age reaching its maximum when the head of the unit is over 65 ; the ratios analysed by occupation exhibit much the same pattern in both countries—*i.e.* high ratios for the self-employed and retired and low for skilled and unskilled workers. The analysis by income groups in the two countries also follows much the same pattern—a high ratio at the lower and higher income levels, with smaller ratios in the middle income ranges.

Probably the most interesting feature of the comparison is the generally higher ratios of net worth to income found in the United States. Over all the spending units in America net worth amounted to almost three years' gross income, compared with a little less than two years' in Great Britain.

The higher American ratio reflects in part the great prosperity of the United States in the post-war years. Incomes have been high in comparison with those in Great Britain ; savings have also been relatively higher in the United States when compared with those in Great Britain, where in some post-war years personal savings have been negative. This relatively greater accumulation of assets in the United States results in the higher ratio of net worth to income. One point should be observed. Except in the case of motor-cars, where both the asset and any liability in respect of it are included in net worth, the higher expenditure on consumer durables in the United States affects the ratio in the opposite direction, *i.e.* makes it smaller. Consumer durables do not appear on the assets side of the net worth account, while any debts incurred in purchasing such goods, *e.g.* hire purchase, are counted as liabilities.

As we have seen the head of a secondary income unit by definition cannot be the head of a household, and in Table XXVI we show the proportions owning various assets and with certain types of debts for all spending units

TABLE XXVI

Extent of Ownership of Assets and Debt Liability
U.S. and G.B. 1953

Type of asset or debt	*Percentage of each group owning asset or owing debt*			
	U.S. *spending units*	**G.B.** *income units*	**G.B.** *Primary income units*	**G.B.** *Secondary income units*
Assets				
Liquid assets	71	67	69	58
Motor car	61	9	11	5
Owner-occupied non-farm home	43	21	27	—
Owner-occupied farm	5			
Business interest	7	4[1]	N.A.	N.A.
Stocks	7	4[2]	4[2]	3[2]
Debts				
All units	62	31	36	14
Hire purchase	43[3]	21	24	12
Mortgage debt	29	10	13	—

[1] The difference in definition of the self-employed between the U.S. and G.B. Surveys should be remembered ; also the poor coverage of the self-employed in the G.B. Survey in 1953. The figures for the 1952 and 1954 G.B. Surveys were 6.3 and 7 per cent respectively.

[2] Proportion of income units with stocks and shares worth over £100.

[3] Proportion of spending units in the *1954* Survey of Consumer Finances.

and income units ; the income units are also divided between primaries and secondaries, and, as one would expect, primary rates of ownership and of debt are higher than the secondary rates. It is probable that we might obtain a better picture if we compared the U.S. spending units with primary income units only. In America about half the spending units own their own homes, compared with only about 27 per cent of primary income units in Great Britain. In 1952, about 60 per cent of the spending units in the

United States owned cars, compared with about 9 per cent of income units in Great Britain. Only a minor part of this difference in the proportions owning cars can be ascribed to differences in the basic unit in the Surveys. Furthermore about 9 per cent of the spending units in the 1953 Survey of Consumer Finances were classified as farm operators, far outweighing the 1 per cent so classified in Great Britain. This 9 per cent were composed of 5–6 per cent owner operators and 2–3 per cent tenant operators.

The large rural sector in the United States will also affect the net worth comparison since the value of owner-occupied farms and buildings and of farm machinery, livestock, and crops of farm-operators are included in the calculations in both countries.

The differences between occupational groups in America do not appear to be so large as those found in Great Britain, and this again appears to stem from the more widespread ownership of some of the asset components of net worth in the United States.

There are no major differences in the definitions of liabilities covered in the Surveys on the two sides of the Atlantic. In Table XXVII is shown a comparison between the relationship of total liabilities and gross income in the United States and Great Britain. Here again the broad pattern is probably fairly reliable but too much emphasis should not be given to the individual figures. The debt ratio for all spending units in the 1953 Survey of Consumer Finances was 38 per cent : *i.e.* debt outstanding in early 1953 amounted to 38 per cent of 1952 money income before taxes. The debt ratio for income units in the 1953 Savings Survey was very substantially less—22 per cent. In the United States 62 per cent of all spending units in the sample had incurred debts, which is just twice the corresponding figure for Great Britain.

The reasons for the relatively higher debt position in the United States are not far to seek. As we have seen, a much larger proportion of spending units in the United States own houses and motor-cars than do income units in Great Britain, and outstanding liabilities on account of such items are much more widespread in the United States. In the 1954 Survey of Consumer Finances some 29 per cent of spending units had mortgage debt compared with 10 per cent of income units in the 1953 Savings Survey ; while more than twice as many spending units in the United States were in debt for items bought on hire purchase (instalment debt). Another item of indebtedness which occurs much more frequently in the United States than in Great Britain consists of debts to doctors, dentists and hospitals for medical services. In the 1953 Survey of Consumer Finances about one-fifth of all spending units were in debt for medical services. This item in the Savings Surveys is so small that it would not be worth tabulating separately, but is included in miscellaneous personal debts.

An examination of the debt ratio by age indicates a considerable similarity in the pattern in the two countries—the ratio increasing to a maximum in the group 35–44 and thereafter declining. There is one striking difference ;

TABLE XXVII

Relationship between Total Debt and Gross Income
United States and Great Britain: 1952–53

Type of unit	U.S. *Spending Units* *Total debt early 1953, as percentage of 1952 money income before taxes*	G.B. *Income Units* *Total debt 1952–53 as percentage of 1952–53 mean gross income*
All units	38	22
Age of head of unit		
18—24	19	4
25—34	45	22
35—44	48	30
45—54	31	24
55—64	32	21
65 and over	34	10
Occupation of head of unit		
Self-employed	68	37
Professional and semi-professional	38	—
Managerial	24	43
Clerical and sales	38	23
Skilled and semi-skilled	33	17
Unskilled and service	34	7
Retired and other	38	14
U.S. 1952 money income before taxes		
Under $1,000	115	...
$1,000—1,999	31	...
$2,000—2,999	27	...
$3,000—3,999	31	...
$4,000—4,999	41	...
$5,000—7,499	48	...
$7,500 and over	36	...
G.B. Gross income 1952-3		
£0—99	...	18
£100—199	...	13
£200—299	...	10
£300—399	...	16
£400—499	...	11
£500—599	...	19
£600—699	...	20
£700—799	...	31
£800—999	...	39
£1,000—1,499	...	56
£1,500—1,999	...	29
£2,000 and over	...	34

the debt ratio for units in which the head was 65 and over is very much lower in Great Britain than in the United States. This probably reflects simply the continuance on a much greater scale of instalment buying and house purchase by Americans in this age range. The contrast in the debt ratios in the lowest age group in Table XXVII is much greater than the ‘ real ’ differences, since, as we have seen earlier, the comparison is distorted because of the differences in definition in the basic unit, which gives rise to the large number of secondary income units in the 18–24 age group in the Savings Surveys.

The differences in the debt ratios between occupational groups are much more marked in Great Britain than in the United States. In this country the ratio is very much lower among skilled and unskilled workers, and among the retired and unoccupied than in the United States, where the ratio for these groups is only a very little less than the ratio for all occupational groups. This again simply reflects the much more widespread use of instalment credit and the greater proportion of people purchasing their houses with mortgages in the United States.

The income analyses in the two countries reflect the same broad pattern—a high debt ratio at the lower end of the income scale, a falling ratio as income rises, with a reversal to a rising ratio in higher income groups.

THE GROSS NATIONAL PRODUCT OF WALES, 1950

By EDWARD NEVIN

Introductory

The appearance of Professor A. D. Campbell's estimates of the national income of Scotland[1] makes it possible that some interest will be aroused by some highly tentative and provisional estimates by the present writer of the gross national product of Wales in 1950. It should be made clear that these estimates can at best indicate only broad orders of magnitude, and they represent little more than a basis for further work now proceeding along these lines at this college. Certain major features have emerged, however, and these may be of some interest to those engaged in British regional economic analysis.

On the conceptual level there are important differences between the broad method of attack adopted by Professor Campbell and that underlying these estimates for Wales. When compiling regional estimates one can attempt to measure either the income received by residents in a given area or the income generated in that area. The difference becomes crucial, of course, in the case of trading profits, since one has to decide on whether one is measuring the profits earned by companies *owned* within a region or those earned by companies *operating* within the region. In the article referred to, Professor Campbell was concerned solely with personal incomes, and naturally adopted the ownership basis; the profits he was concerned with, for example, were those accruing to Scots residents, and not necessarily those of enterprises operating in Scotland. This could mean, for instance, that this component of the Scottish national income, so defined, was rising at a time when the Scottish economy was doing badly. So far as personal incomes are concerned, a similar approach has been adopted in the present estimates for Wales, the incomes included being only those actually assessed for tax in Wales, and not those generated in Wales. But the basic purpose of these estimates for Wales is much wider than could be satisfactorily achieved from estimates of personal incomes only. We wish to provide some sort of foundation for further investigation into the characteristics and progress of the Welsh economy, so that the ownership of economic assets operating in Wales (or the extent of Welsh ownership of assets existing outside Wales), while an interesting and important issue, has no very direct relevance to the problems of the prosperity of the thirteen counties of Wales and Monmouth. For this reason, the estimates of the Welsh gross national product were modelled on those given in the Blue Book on *National Income and Expenditure of the United Kingdom*, 1946–53, the aim being to achieve a picture of all aspects of the Welsh economy. The scope of the tables was therefore defined to include all persons normally resident in, and all enterprises operating in, the geographic area of Wales and Monmouth. For the gross national product, therefore, estimates were made of all incomes *generated* in Wales, including profits paid out to persons outside Wales. Needless to say, it is impossible to claim at the present stage of investigation the fairly high degree of accuracy which Professor Campbell's estimates can reasonably claim; apart from the wider scope of the investigation, separate data are published by various official agencies for Scotland to an extent which arouses the keenest envy on the part of those of us working on the darker fringe of the British economy. The broad details of the method of calculation of the estimates discussed here are summarised in the appendix to this article: statistics relating to Wales are generally not separately published and the figures estimated here were perforce obtained by applying to United Kingdom figures an allocation factor based on the most relevant data available. Indeed, the task was brought within the range of practicability only by the publication of separate figures for Wales in the 1950 Censuses of Production and Distribution.

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[1] A. D. Campbell, ' Changes in Scottish Incomes, 1934–49,' *Economic Journal*, Vol LXV, No. 258 ; June 1955, pp. 225–40.

The Welsh National Product

In Table I are shown the main features of the estimated gross national product of Wales in 1950. No very significant differences emerge from the comparison of the composition of the expenditure side for Wales on the one hand and the United Kingdom on the other. Consumption is a somewhat higher proportion of the total, as one would expect in a relatively poor country like Wales, but despite this, the incidence of indirect taxation seems to have been slightly lighter in Wales than in the U.K. This result emerges primarily because alcohol and tobacco form a significantly smaller proportion of the total consumer expenditure at market prices in Wales than in the U.K. —12.5 per cent compared with 16.7 per cent.[1] The most striking difference shown in the Table is, of course, that while the U.K. attained an export surplus amounting to some 3 per cent of G.N.P. in 1950 the estimated gross national expenditure for Wales exceeds estimated gross domestic product by some £34 million, or 8 per cent of the estimated G.N.P. The figure for net imports, however, is a residual for which no direct check is possible, so that it should be taken as little more than a rough guess emerging from a collection of (one hopes) reasonably intelligent estimates. But it does suggest that in 1950 the Welsh economy was absorbing somewhat more wealth than it was currently producing; at the same time it should be pointed out that the estimates also indicate a rather higher rate of gross investment in Wales than in the U.K.

In addition, comparisons can be made between the countries on a *per capita* basis. If the gross output per head of total population is calculated, it appears that in 1950 the estimated figure for Wales was £168, which is only

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[1] This is a finding with intriguing social implications, but the task of estimating consumers' expenditure in Wales under various headings is particularly difficult, and a great deal of work will have to be done in this field before any reliable statistical evidence can be claimed for the well-known freedom of the Welsh people (at least in comparison with the English) from alcoholism and nicotinism.

TABLE I

The Gross National Product of Wales, 1950[1]

Expenditure generating gross product	Wales		U.K.
	£m	%	%
At market prices			
1. Consumers' expenditure	374	*86*	*80*
2. Current expenditure on goods and services by public authorities ...	87	*20*	*18*
3. Gross capital formation	63	*15*	*13*
Total domestic expenditure at market prices	524	*121*	*111*
4. *Less* taxes on expenditure	—73	*—17*	*—18*
5. *Plus* subsidies ...	18	*4*	*4*
6. Net exports ...	—34	*—8*	*3*
Gross national expenditure at factor cost ...	434	*100*	*100*

Shares in gross product	Wales		U.K.
	£m	%	%
7. Income from employment	320	*74*	*65*
8. Income from self-employment ...	42	*10*	*12*
9. Gross trading profits of companies...	94	*22*	*19*
10. Gross profits and surpluses of public enterprises and corporations	8	*2*	*3*
11. Rent	19	*4*	*4*
12. Residual error ...	1	—	—
Total domestic income before providing for depreciation and stock appreciation	485	*112*	*103*
13. *Less* stock appreciation	—27	*—6*	*—6*
Gross domestic product at factor cost	458	*106*	*97*
14. Net income from abroad	—24	*— 6*	*3*
Gross national product at factor cost ...	434	*100*	*100*

[1] Minor discrepancies in the totals are due to rounding; the basic calculations for Wales were in £000's. All of the data shown in the table for Wales are, of course, liable to appreciable error, but the estimates of the various items differ considerably in reliability. The most dependable estimates (i.e. where the error is unlikely to exceed ± 10 per cent) are 2, 7, 8 and 10; less dependable (range of error say ± 20 per cent) are 1, 4, 5 and 9. Items 3, 6, 11 and 13 are especially hazardous estimates.

76 per cent of the corresponding figure for the U.K. (£221). By contrast, Professor Campbell has estimated that income per head in Scotland in 1949 was 93 per cent of the U.K. figure.[1] Smaller differences are suggested, however, if the total gross output is divided by the numbers actually engaged in economic activity in each region. According to the 1951 Census of Population, 42 per cent of the total population of Wales was occupied in that year (including unemployed persons); applying this ratio to the population of Wales at mid-1950, the total gross output was produced by a labour force of about 1.09 million. Gross output per person engaged was therefore £398, or 83 per cent of the corresponding U.K. figure (£480).[2] If the mid-year figure for unemployment is subtracted from the estimated occupied popula-

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[1] *Op. cit.*, p. 30. The imperfections of ' gross output per head ' if it is used as a crude indicator of economic efficiency must always be borne in mind, of course.

[2] The numberse engaged in the U.K. in 1950 were estimated by applying to the mid-1950 U.K. population the ratio of occupied persons to total population in Great Britain in 1951 (46 per cent).

tion, the gross output per person at work in 1950 comes out at £413 for Wales, which is 85 per cent of the corresponding figure for the U.K. (£487.)

This difference in the comparative figures of gross output per head of the total population on the one hand and per head of the occupied population on the other (76 and 83 per cent respectively of the U.K. figures), reflects the marked contrast between Wales and the rest of Great Britain in the proportion of total population actively engaged in economic activity. What it comes to is that per head of its total population Wales seems to have produced in 1950 about 24 per cent less than the average for the U.K. as a whole. Of this deficiency of 24 per cent, about 15 per cent seems to have been due to lower productivity in Wales,[1] about 2 per cent to the higher incidence of unemployment, and about 7 per cent to the smaller ratio of occupied persons to the total population.

The extent of the relative under-employment of the Welsh population is shown very strikingly by Table II. It will be seen that in 1951 only 42 per cent of the total population of Wales was classified as occupied, compared with 45 per cent in Scotland and 47 per cent in England. The difference arises almost wholly because of the lower proportion of women engaged in economic activity—19 per cent in Wales compared with 26 per cent in Scotland and Northern Ireland and 28 per cent in England. It is interesting to note that in both England and Scotland these proportions were the same in 1931 as in 1951, whereas for Wales the proportion rose from 16 per cent to 19 per cent between those years. On the face of it, therefore, one would imagine that this particular factor making for lower output per head of total population in Wales is becoming less important. An offsetting factor, however, is that in the normal course of events the active element in the Welsh female labour force will probably decline over the next twenty years. In 1931 the number of females in Wales in the age group 0–15 years exceeded that in the age group 40–59 years by some 40,000, so that the active element in the Welsh female population could have been expected to rise. In 1951, however, the age group 0–15 years was some 80,000 smaller than the 40–59 age group, so that the demographic trend will operate against an increase in the occupied female population.

TABLE II

Occupied Persons and Total Population, 1931 and 1951

Country	*Occupied persons as per cent of total population*					
	Males		*Females*		*Total*	
	1931	*1951*	*1931*	*1951*	*1931*	*1951*
England	64	67	28	28	45	47
Scotland	67	65	26	26	46	45
Wales	67	66	16	19	42	42
Northern Ireland	64*	63	28*	26	45*	44

Sources : *Annual Abstract of Statistics* ; *Digest of Welsh Statistics*, No. 1, 1954 ; *Census, 1951, 1 Per Cent Sample Tables*, Part I. *1926

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[1] Discussed in more detail below, pp. 67–69.

Furthermore, it is worth noting from Table II that, despite this increased participation of females in economic life, the overall proportion of occupied persons in the total population of Wales has remained obstinately at 42 per cent between 1931 and 1951, in contrast with Scotland and Northern Ireland, where it has fallen slightly, and England, where it has risen. Once again—and in contrast with both England and Scotland in this case—demographic factors will be operating against Wales in the next twenty years, since the 0–15 age group of the male population is slightly smaller than the 45–64 age group. And all this, of course, takes no account of the continuing and substantial loss which Wales suffers, year by year, through migration.[1] All in all, therefore, the low proportion of occupied persons in the Welsh population, and the relative poverty which it implies, is likely to persist, and quite possibly worsen, unless positive steps are taken to increase opportunities for, and reduce social resistance to, the employment of women in Wales.

The influence of the relatively high level of unemployment in Wales, on the other hand, has declined somewhat since 1950, when an average of 3.6 per cent of the insured population was unemployed, compared with 2.8 per cent in Scotland and 1.6 per cent in the U.K. as a whole. During 1954, for example, unemployment in Wales averaged 2.5 per cent compared with 2.8 per cent in Scotland and 1.5 per cent in the U.K. Nevertheless, it seems inevitable that unemployment in Wales will continue above the U.K. average for many years. The major industries in South Wales, where the unemployment is concentrated, are those of coal-mining and metal manufacture; these industries have the unhappy characteristic of requiring men of a high degree of physical fitness and at the same time creating a relatively high wastage through industrial sickness and accidents; a large proportion of the unemployed population, therefore, consists of rather elderly men whose health has been undermined by the work and who are therefore seeking employment which makes smaller physical demands upon them.[2]

Personal Income

Before discussing the third element in the deficiency of the Welsh national product—low output per head—it may be useful to link what has been said about gross output with the estimates of personal incomes in Wales. With the aid of the Inland Revenue's income-census for the year 1949–50,[3] it is possible to obtain a reasonably accurate picture of personal incomes actually assessed in Wales—as opposed to those generated in Wales with which Table I above was concerned.[1] Since the two sets of estimates were obtained from completely different types of data, the Inland Revenue figures provided a very useful check on the gross output estimates. From the output calculations (based primarily on Census of Production figures) estimated wages and salaries paid in 1950 by enterprises operating in Wales amounted to £294 million,[2] while profits and professional earnings by individuals and sole traders were estimated at £42 million. The Inland Revenue data, with the minor adjustments mentioned in footnote 1, yielded estimates of £291 million for wages and salaries and £40 million for profits and professional earnings. This, is of course, as it should be; it would be surprising if the vast majority of earned incomes arising from Welsh economic activity were not actually assessed in Wales.[3] For the estimates of unearned incomes, however—rent, dividends and interest—the position was different; persons receiving income from employment or self-employment usually live and are assessed for tax near their place of work, but the *rentier* has no compelling motive for living near the enterprises in which his wealth is invested. It was not surprising, therefore, that unearned incomes accruing to persons assessed in Wales in 1950 were estimated at only £26 million, compared with the estimated total of £44 million actually paid to persons by Welsh enterprises from their 1950 activities in the form of rent, dividends and interest.

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[1] Migration from Wales at the present time is considerably more substantial in relation to total population than migration from Scotland. Between the census of 1951 and mid-1953 the number of persons migrating from Wales amounted to some 25,000—about 96 per 10,000 population. For Scotland the comparable figure was about 69 per 10,000.

[2] See *Wales and Monmouthshire,* Report of Government Action for the year ended June 30th, 1951 ; Cmd. 8385, London, H.M.S.O., 1951.

[3] See *94th Report of the Commissioners of Inland Revenue, 1951* (Cmd. 8436, London, H.M.S.O., 1951), pp. 95–127 ; *95th Report of the Commissioners of Inland Revenue, 1952,* (Cmd. 8726, London, H.M.S.O., 1952), pp. 93–145.

TABLE III

Personal Incomes, 1950

Type of income	*Wales*		*U.K.*[1]
	£m	%	%
Income from employment[2]	317	*83*	*74*
Income from self-employment	40	*10*	*14*
Rent, dividends and interest	26	*7*	*12*
Total[3]	383	*100*	*100*

[1] Source: *National Income and Expenditure, 1946–53*, London, H.M.S.O. 1954, Table 2, p. 4.

[2] Includes employers' insurance contributions.

[3] Excluding National Insurance benefits and current grants from other public authorities.

The resulting pattern of incomes may be seen from Table III. The relatively large share of income from employment in Wales follows largely from the fact that almost a half of the distributions of Welsh enterprises were assessed outside Wales. Here is perhaps the sharpest contrast between Wales and Scotland, for Professor Campbell's estimates indicate that the share of property incomes in the Scottish total is higher than the U.K. average, thus confirming statistically widespread popular opinions concerning the capacity of the Scots for the conservation of their wealth.[1] The share of total incomes in Wales arising from self-employment also appears to be relatively small. To some extent this may be due to the assessment outside Wales of profits accruing to sole traders and partnerships; in addition, certain professional activities (especially banking, insurance and finance, and wholesale trading) play a smaller role in Welsh economic life than in that of the U.K. as a whole, while the average farmer's income in Wales is almost certainly well below the national average.[2]

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[1] But note the adjustment for civil servants and merchant seamen described briefly in the notes to Table III in the appendix.

[2] This figure does not include the estimated payments in cash and kind to the Armed Forces or employers' contributions.

[3] The bulk of the differences between the Inland Revenue figures and the estimates of incomes generated from employment in Wales are unquestionably due to estimating errors; but since an unknown element in the differences may represent incomes assessed outside Wales but earned inside Wales, no attempt has been made to eliminate them at this stage. Indeed, the very small proportions of the discrepancies came as a welcome surprise.

The Structure of the Welsh Economy

Of the estimated deficiency of about 24 per cent in the *per capita* gross output of Wales in 1950, as compared with the U.K. as a whole, it has been argued that about 9 per cent is attributable to the higher proportion of the population of Wales which is either not occupied in the Census sense of the word or was actually unemployed in 1950.

The estimated deficiency of 15 per cent in gross output per person at work in 1950 could arise either from a bias in the distribution of resources

TABLE IV

The Structure of the Welsh Economy, 1950

Sector	*Labour Force*		*Gross Output per Head*		
	Wales %	*U.K.* %	*Wales* £	*U.K.* £	*U.K.* % *of Wales*
Agriculture, forestry and fishing	8.3	5.0	299	591	198
Mining and quarrying	12.3	3.8	435	476	109
Manufacturing industry	27.3	37.6	524	512	98
Building and contracting	6.1	6.2	497	511	103
Gas, electricity and water	1.8	1.7	450	664	148
Transport and communication	8.9	7.8	491	520	106
Distribution	11.6	12.2	392	583	149
Insurance, banking and finance	1.3	2.0	707	704	100
Other services	7.5	8.3	538	559	104
Public administration and defence... ...	7.4	8.0	374	399	107
Public health and education	5.9	5.2	247	292	118
Domestic service	1.6	2.2	202	204	101
All sectors	100	100	444	507	114

Notes. Cols. 1 and 2: Based on *Census 1951, 1 Per Cent Sample Tables*; the G.B. figures given in this source were raised by 2.4 per cent to bring them approximately to a U.K. basis. This is the adjustment indicated by a comparison of the 1951 ' manpower available ' figures given for the U.K. and Great Britain by the new and old series respectively of the London and Cambridge Economic Service Bulletin (see especially the issue for March 1955). The number engaged in Public Health and Education is taken as the number classified under ' Education ' and ' Medical and Dental services '. The number engaged in ' Other Services ' is taken as the total of the ' Professional Services ' and ' Miscellaneous Services ' groups *minus* the number in Public Health and Education and in domestic service

Cols. 3–5 : The estimates of total output per head differ from those quoted in the text because of (i) the different population figures being used and (ii) the gross output figures used in the text included (*a*) income from dwellings, (*b*) services to non-profit institutions, (*c*) stock appreciation, (*d*) residual error, and (*e*) net imports.

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[1] See Campbell, *op. cit.*, p. 234.

[2] See footnote 5, p. 68, below.

towards low productivity sectors or from lower productivity within sectors.[1] In Table IV are shown the labour distributions in Wales and the U.K. and the estimated outputs per head in the main economic sectors of both regions. Unfortunately, the only available breakdown of the working population of Wales is that provided by the 1951 Census of Population,[2] so that the numbers engaged in the various sectors in both the U.K. and in Wales have had to be taken from the occupational distributions given in the 1951 Census.[3] However, there is no reason for thinking that this will seriously affect the comparison.

It will be seen from Table IV that it is only in manufacturing industry that the estimates indicate any superiority for Wales in output per person engaged.[4] The discrepancy between Wales and the U.K. in the level of productivity in agriculture is especially striking, although not entirely surprising.[5] The relatively low productivity per head in gas, electricity and water and in distribution probably reflects mainly the high degree of isolation of much of the population of North and mid-Wales. Taking the total of all the sectors, the estimated output per head in Wales averages out at £444, or some 14 per cent less than the U.K. average.

In assessing the degree to which this relatively low output per head in Wales is due, on the one hand, to lower *per capita* output in particular sectors, and, on the other hand, to the peculiarities of the economic structure of Wales, one is faced with familiar and formidable difficulties. In principle, the difference in *per capita* output arising from lower output within sectors could be measured by the index

$$\Sigma(\mathrm{P_{UK}\,E_W}) \Big/ \Sigma(\mathrm{P_W\,E_W})$$

and the difference attributable to economic structure by the index

$$\Sigma(\mathrm{P_W\,E_{UK}}) \Big/ \Sigma(\mathrm{P_W\,E_W})$$

where P represents gross output per person engaged and E the percentage of the total labour force engaged in each sector. The suffixes denote Wales and the

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[1] In this section the nebulous word ' productivity ' is used simply as a shorthand form of ' value of gross output per person engaged '.

[2] The industrial distribution of employees and unemployed is, of course, available for 1950 ; but to use these figures rather than those of numbers engaged would introduce serious errors, both absolutely and relatively between Wales and the U.K., for sectors where self-employment is substantial—*i.e.* agriculture, professional services, distribution, etc.

[3] This is one reason why the total outputs per head shown in Table IV differ from those mentioned on p. 62–4 above, for which mid-1950 population figures were used. Other reasons for differences are that the total output per head in the U.K. is shown in the table as a percentage of the estimated figure for Wales, rather than *vice versa*, and that the gross outputs used in Table IV exclude certain items (mentioned in the notes to the table) which cannot be allocated to individual sectors.

[4] This average, of course, conceals wider variations—in either direction—in the various branches of manufacturing industry.

[5] According to some estimates (as yet unpublished) made by Mr. M. B. Jawetz of the Department of Agricultural Economics, University College of Wales, Aberystwyth, a very substantial number of farms in Wales in 1951–52 were making a net loss if the labour contributed by the farmers and their wives was valued at the wage of an ordinary labourer and treated as a cost.

U.K. respectively, and the summation is carried out over sectors. A limitation on this kind of comparison is, of course, that it rests on implicit assumptions of an unrealistic character.[1] Moreover, the results are not wholly unambiguous in the sense that the complementary index numbers (indicating the decline in the U.K. average output which would result from attributing to the U.K. Welsh outputs per head and the Welsh labour distribution respectively) do not yield entirely similar results.

If one is prepared to overlook these difficulties, however, the data shown in Table IV indicate a value of 114 for the first index and of 103 for the second index, suggesting that the achievement of U.K. levels of gross output per head would raise the average output in Wales by 14 per cent., while alternatively, a twisting of the economic structure of Wales to the U.K. pattern would raise it by 3 per cent.[2] It seems reasonable to conclude from this that, as a factor making for the lower overall output per head in Wales, relatively low output per head within sectors is of very much greater importance than the peculiarities of the structure of the Welsh economy. Indeed, in view of the small value obtained for the second index and the basic uncertainties of the whole comparison, it would be unsafe to conclude, as a matter of practical policy, that a redistribution of the Welsh labour force along U.K. lines would necessarily raise the overall output per head.

Conclusion

Put briefly, then, these highly provisional estimates at least succeed in high-lighting two major types of problem which seem to face the Welsh economy. The first, and simplest, is to discover a way in which that part of the Welsh population which is at present inactive[3] can be brought into economic life—always assuming, of course, that the absence from paid employment of a large section of the female population of Wales is enforced through lack of opportunity rather than the result of a perfectly free choice. This is in fact an assumption which would not arouse much disagreement.

The second, and more tangled, question is that of low output per head in Wales, especially in the primary industries. At first sight the problem of low output may appear one which is only too well-known and straightforward. In this context, however, the issues are not entirely simple. The weakest sectors in the Welsh economy, if the estimates are not wildly wrong, are clearly agriculture and mining, and in these sectors the major difficulties are generally agreed to be geological and geographical. For this reason, the solution so far as Wales is concerned, given the aim of raising average output per head, is a drastic reduction in the labour force of these sectors and the transference of labour to sectors where Wales has a smaller relative disadvantage or even a superiority in productivity. But in the context of the U.K. balance of payments, of course, smaller supplies of Welsh beef and anthracite might be regarded as a very questionable development. One is beginning, in other words, to raise questions where the interests of a particular region may appear not to coincide with those of the wider region of which it is a part.

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[1] To be precise, gross output per head and numbers engaged in each sector are assumed to be wholly independent variables.

[2] The fact that the actual overall U.K. average output per head was only 14 per cent above that for Wales shows merely that the effects of such changes are not additive—e.g., the benefit of a switch of the labour force to the U.K. pattern would depend partly on whether U.K. *per capita* outputs or Welsh *per capita* outputs were being assumed.

[3] The unemployed are not meant here, of course ; as mentioned earlier, this is a relatively minor—though intractable—problem at the moment.

However, these are weighty issues to be raising on the basis of such crude estimates. All that is necessary to say here is that they illustrate the kind of problems on which the more exhaustive investigations on which we are now engaged here can throw some light for the guidance of our policy-makers.

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APPENDIX

A complete set of the estimated social accounts for Wales is being circulated by the Department of Economics, University College of Wales, Aberystwyth, and can be obtained by anyone interested in the Welsh economy or in regional economic analysis generally. This gives full statistical notes and descriptions of the methods of estimation employed. The present note will indicate only the broad outline of the methods and sources used to construct the tables shown in the text.

Table I

Consumers' expenditure was estimated almost entirely on the basis of the 1950 Census of Distribution, appropriate ratios derived from this being applied to the Blue Book figures for the U.K. ; other sources (reports of nationalised industries, statistics of cinema seatage, etc.) were used for items not covered by the Census of Distribution. The expenditure by *public authorities* on goods and services was estimated from local government financial statistics, numbers in police forces, local and central government personnel, numbers in Armed Forces, etc. Estimates of *capital formation* were based in most cases on the share of the sectors concerned in the gross product of those same sectors in the U.K. as a whole, although in the cases of nationalised industries, housing and other building, direct estimates were possible. *Indirect taxation* was estimated from the difference between consumers' expenditure at market prices and at factor cost. (The latter values were derived from market values by applying the same correction as that indicated for the U.K. by the Blue Book.) *Subsidies* were calculated on a similar basis for consumers' expenditure on food, from local authority returns for housing and school meals, from *Farm Incomes in England and*

Wales and the *Digest of Welsh Agricultural Statistics* for agriculture, and on a proportional basis (i.e. share of the Welsh industry in the U.K. total) for other sectors. The figure for *net exports*, of course, is simply a residual—a notoriously unreliable character. *Incomes* were taken from the estimates made for Table IV.

Table III

The estimates of personal incomes in Wales were derived from Table 98 of the 94th Report of the Commissioners of Inland Revenue. In the case of wages and salaries additions were made in respect of non-industrial civil servants, merchant seamen and Armed Forces ; the estimated incomes of the two former groups were taken from the appropriate table in the ' county tables ' presented in the 95th Inland Revenue report. An adjustment was also made for the rise in incomes between 1949 and 1950. This latter adjustment was also made for professional earnings and for rent, dividends and interest ; otherwise the Inland Revenue figures were used for these groups without change.

Table IV

For *agriculture*, wages, rent, and farmers' income were calculated from the Ministry of Agriculture's *Farm Incomes in England and Wales*, and from acreage estimates of various farm-types made by Mr. M. B. Jawetz, of the Department of Agricultural Economics, Aberystwyth, in an unpublished paper. A grossing-up factor was applied to net income to reach comparability with the Blue Book figures. For *mining and quarrying*, *manufacturing*, and *gas*, *electricity and water*, wages and salaries were estimated from 1950 Census of Production data. Profits were estimated from labour and raw material costs used in conjunction with the percentages shown for various trade groups in recent Inland Revenue reports. For *distribution*, wages and profits were estimated in a similar way from the data contained in the 1950 Census of Distribution. For *other sectors*, estimates of wages and profits were based on reports of the nationalised industries, afforestation acreages, landings of fish in Welsh and other ports, statistics relating to the output of building and civil engineering, new housing construction, numbers of commercial vehicles registered in Wales, expenditure on health and education by local education authorities and the Welsh Board of Health, and from employment data given in Ministry of Labour returns and the Census of Production. In every case calculations were made on a similar basis for the U.K. and compared with the Blue Book data, corrections being applied wherever it was necessary and feasible. For employers' contributions under National Insurance, employment data were used in collaboration with the statutory contribution rates ; other employers' contributions were assumed to bear the same ratio to these as was the case in each sector in the U.K. as a whole.

HAS THE DISTRIBUTION OF INCOME BECOME MORE UNEQUAL ?

By DUDLEY SEERS

The publication of the 1955 National Income Blue Book takes the series of income statistics up to 1954, as well as introducing several revisions. We are now able to assess the effects of economic developments in the past few years, including the policies of the Conservative Government, on the distribution of income and on the living standards of different classes.

In papers published in the Bulletin a few years ago (some of which were reprinted in my monograph *The Levelling of Incomes since 1938*), I showed that there had been a substantial shift towards the wage-earner in the distribution of income (particularly in the distribution of ' real ' income) during the war. The share of wages in the national product had not changed significantly, but the limitation of dividends had raised the share of wage-earners in personal income, while the increase in direct taxes had produced a rather greater shift in post-tax income, and price movements had further favoured the wage-earner in so far as the subsidisation of food prices had meant that living costs had increased proportionately less for the wage-earner than for other sections of the community. Under the Labour Government of 1945–50, there was a further shift towards the wage-earner, but it was not nearly so great : wages continued to rise more rapidly than property incomes, but the social impact of direct taxation did not change much, and while prices continued to rise, they increased almost as much for goods bought by wage-earners as for purchases of other classes, because of the ceiling on food subsidies and the sharp rise in tobacco taxation.

What has happened in the last few years ? In some quarters it seems to be believed that the rise in wages has been so rapid that the egalitarian trend has continued ; in others, that the Budgets and increases in dividends have restored inequality on the pre-war scale. Is one of these views broadly correct ? Or is the truth somewhere in between ?

The clearest way of analysing changes in income is to proceed step by step, starting with the division of the national product between wages and other incomes, and then allowing in turn for changes in undistributed profits, in taxation and in prices, until we end with the distribution of ' real ' disposable personal income.

We need not concern ourselves with year-to-year changes, and I propose to take figures for 1938, 1946, 1950 and 1954 only. Comparing figures for 1938 and 1946 will show the effects of the war and provide an opportunity for checking, from the latest official estimates, the results given in my earlier papers. The year 1950 was chosen as an intermediate one in the post-war period. It was the last complete one of the Labour Government. (The year in which the Government changed, 1951, is unsatisfactory as a reference year because prices, taxes, and incomes were fluctuating rather erratically under the impact of the Korean war.)

Share of wages in the value of output

The share of wages in the value of national production seems to have continued stable, as it has apparently been for decades. How we handle most detailed points does not affect the general conclusion very much, but it seems preferable to treat employers' contributions to national insurance as indirect taxes, instead of as part of the domestic product (at factor cost). Whether we include ' stock appreciation ' or not makes more difference, and, since there is something to be said on both sides of this controversy, I give the answer on both definitions. Neither of them, however, shows much movement :

Wages as percentage of Gross Domestic Product (G.D.P.)

	1938	*1946*	*1950*	*1954*
When G.D.P. :				
Excludes stock appreciation ...	39	38	41	40
Includes stock appreciation ...	40	37	39	40

The ratio was slightly lower in 1946 (when part of the labour force was still receiving forces' pay) than in 1938, and whether one considers the percentage high or low in 1950 depends on the view one takes of stock appreciation.

However, by and large, the traditional stability in the region of 40 per cent continued.[1] To digress from the main theme for a paragraph, this continued stability is slightly surprising, if one allows for the changes in the structure of industry over these 18 years and bears in mind the differences in the share of wages from industry to industry. In particular, manufacturing has probably become more important in the national product, and the share of wages in manufacturing is high. The share of national product produced in the metal-using industries, which are fairly wage-intensive, has certainly risen sharply. On the other hand, public administration and the social services, in which salaries are more important than wages, have also grown, and the rise in import prices relative to wages would have tended, as Kalecki has demonstrated, to reduce the share of wages in the domestic product. The stability we see above is, therefore, the result of opposite influences balancing one another.

But stability there has been. In view of the opposing effects of structural changes, we can conclude that there has not been much change in the distribution of the product of industry between labour and capital.[2] Movements in favour of, or unfavourable to, the wage-earner must be sought elsewhere than in industry.

Distribution of personal income

Next let us turn to the distribution of personal income.

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[1] The historical stability revealed by Sir Arthur Bowley was in terms of *net* national income, but using gross domestic product would have made little difference. So one concludes that stability did in fact continue, although the percentages above, would, of course, be slightly higher if the denominator excluded depreciation allowances. (On the other hand, they would also be slightly lower if the authors of the Blue Book had, like Sir Arthur, included shop assistants' earnings in salaries instead of wages).

[2] *I.e.* in an average weighted, if we could do so, by the same industrial structure throughout.

TABLE I[1]
The distribution of Personal Income

Type of income	Amounts (£ millions)				Percentages			
	1938	*1946*	*1950*	*1954*	*1938*	*1946*	*1950*	*1954*
Property income ...	1,128	1,286	1,320	1,678	22	15	12	12
Mixed incomes	643	1,077	1,247	1,504	13	12	12	11
Wages	1,920	3,270	4,580	6,170	38	38	43	44
Salaries and pensions	982	1,756	2,534	3,447	20	20	24	24
Forces' pay	66	577	230	335	1	7	2	2
Social security benefits	275	672	755	1,021	5	8	7	7
Total	5,014	8,638	10,666	14,155	100	100	100	100

Notes. 'Property income' covers rent, dividends and interest. 'Mixed incomes' include earnings of professional people, farmers, shopkeepers and other self-employed. 'Pensions' include pensions of civil servants and employers' contributions to pension funds. 'Social security benefits' include national insurance benefits, national assistance benefits, family allowances and pay on release leave.

The items correspond to those in Table 2 of the National Income Blue Book, except that employers' contributions to national insurance are excluded, and figures for 'mixed incomes' (and therefore total personal income) have been adjusted to make them net of depreciation allowances and stock appreciation. (Estimates of stock appreciation for the self-employed in 1938 and 1946 were taken from Cmd. 8203).

[1] In this and succeeding tables the percentages may not add exactly to 100 because of rounding.

The smallness of the rise in property income up to 1950 represents the effect of cheap money policy, rent control and (in particular) dividend limitation. Corporate profits rose in line with wages, indeed somewhat faster, but until 1950 the increase was absorbed almost entirely by profits tax or company reserves. It was only after 1950 that dividend payments started to rise, thus stabilising the share of property income in personal income.

It can be seen that the share of the self-employed has continued to decline slightly. This is, however, one of those summary conclusions which may mislead the unwary, for the share of farmers in personal income has about doubled (even though 1954 was a bad year for agriculture), whereas the shares of professional people and other self-employed have declined quite considerably throughout the period.

Since wages retained an approximately constant share of the national product, and since the proportion of the national product converted into personal income fell between 1938 and 1950 (because of the rapid increase in undistributed profits), the share of wages in personal income rose. In 1946, this rise was masked by the incompleteness of demobilisation, but it had become clear by 1950, after which there was little further rise. That there was any rise at all in recent years, after dividends started to take an increasing share of the national product, must be attributed to the continued slowness of the rise in rents, in interest payments, and in the incomes of the self-employed.

At first sight, the development of salaries seems to have been very similar to that of wages, and to have implied that, contrary to the common impression, salary-rates have kept pace with wage-rates. One explanation is, however, that the number of salaried employees has increased much more than the number of wage-earners. Between 1938 and 1946, the civil service grew considerably, while subsequently there were large increases in the numbers of salaried employees in the social services, and the proportion of salaried employees in private industry may well have risen.[1] Secondly there has been an increase in private pension schemes, which has raised this percentage, but only by about one unit. There may also have been a change in the composition of salaried staff. Still, these figures suggest at least that salary-rates have not fallen so dramatically compared to wage-rates as is widely believed, or indeed as was implied by official estimates in earlier White Papers and Blue Books.

The rise in the proportion of personal income obtained from social security benefits since 1938 seems surprisingly small, and the decline since 1946 is even more surprising. The latter point is easily explained, however, because the 1946 figures were inflated by the pay of those on release leave (£163 millions, or 2 per cent of personal income). It should also be remembered that unemployment was quite heavy in 1938, but negligible in the post-war years considered here.

The general picture, therefore, is that the shift in the distribution of income from property income to labour incomes and social security benefits, which had been considerable between 1938 and 1946 and had continued up to 1950, virtually ended then.

The distribution of personal income after tax

The next step is to allow for direct taxation. Unfortunately, the Blue Book gives us estimates of taxes paid in respect of categories of income rather broader than those previously used. Separate data are given for forces' pay and for ' transfer incomes ', which apparently have the same coverage as what I have called ' social security benefits '. But taxes paid in respect of wages are not distinguished from those paid in respect of salaries, nor are any others shown separately.

Let us first make do with what information we can calculate directly from the Blue Book. This is shown in Table II.

Comparing Tables I and II, it can be seen that for each year, pre-war or post-war, the effect of direct taxation was to reduce the share of property income and mixed incomes by about 3 per cent, with a corresponding rise in the shares of wages and salaries. It seems curious that this effect has not increased since 1938, in view of the considerable increase in rates of direct taxation. One reason is that while no income tax (to speak of) was paid by wage-earners in 1938, and not much by salary-earners, the very rise in their incomes has pushed millions of employees into taxpaying brackets. Secondly, direct taxes include not only income tax and surtax, but also national insurance contributions, and the rise in the rates of contributions has particularly

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[1] Increases in the productivity of factory operatives are usually not matched by the clerical workers, so that more office staff has to be hired to handle the increased paper work.

TABLE II

The distribution of personal income after tax[1]

Type of income	*Amount (£ millions)*				*Percentages*			
	1938	*1946*	*1950*	*1954*	*1938*	*1946*	*1950*	*1954*
Property income and mixed incomes ...	1,538	1,794	2,015	2,559	33	24	21	20
Wages and salaries ...	2,793	4,476	6,421	8,774	60	60	68	69
Forces' pay	65	554	213	317	1	7	2	3
Social security benefits	275	665	745	1,007	6	9	8	8
Total disposable income	4,671	7,489	9,394	12,657	100	100	100	100

[1] The figures in this Table do not quite correspond to those in the bottom half of Table 8 in the Blue Book, because although the notes say that Forces' pay has been redefined to exclude ' non-effective ' pensions and gratuities, and the item in Table 2 has been thus treated, the authors apparently did not adjust this table.

affected employees—it has had only a slight effect on ' property and mixed income'. Lastly, there are, of course, many 'small' business men who pay rather little taxation.

One might have expected recent tax changes, nevertheless, to have had some effect, particularly the reductions in rates of income tax. Here again, the effect has been muffled by income changes ; it has been accompanied by rises in dividends which must have themselves generated considerable revenue.[1]

To illustrate these comments, here are the percentages that direct tax payments took out of :

	1938	*1946*	*1950*	*1954*
Property income and mixed income	13	24	22	20
Wages and salaries	4	11	10	9

While changes in the rate of taxation have slightly outweighed these other influences on the proportionate tax burden borne by property income and mixed income, both when rates were rising and when they were falling, we have to use a decimal place to see the net effect[2] :—

Share of property and mixed incomes in personal income

	1938	*1946*	*1950*	*1954*
Before tax	35.3	27.4	24.1	22.5
After tax	32.9	24.0	21.4	20.2
Difference	*2.5*	*3.4*	*2.7*	*2.3*

Although no information is given us about the respective tax loads on ' mixed ' compared to ' property ' incomes, we can confidently say that the continued decline after 1950 in their combined share of post-tax income is due mainly to the fall in pre-tax mixed incomes already noticed.

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[1] Throughout this section it should be borne in mind that ' pre-tax ' dividends *are* affected by taxation on profits.

[2] This expansion shows not merely how small has been the change in the burden of taxation, but how small is the effect of direct taxation anyway in the distribution of personal income. The shift achieved by direct taxation in 1954 (from 22.5 per cent to 20.2 per cent) is not great by comparison with the effect of other changes since 1938 on the pre-tax distribution (which shifted the share of property and mixed incomes from 35.3 per cent to 22.5 per cent).

We can, however, make some attempt to separate the effects of taxes on wages and salaries, so as to show the development of each after taxation has been paid. This is something that the authors of the Blue Book once used to do for us, and perhaps we should be warned by the fact that they no longer attempt it. On the other hand, it is a most useful step, as we shall see, and ought not to give rise to very great error : so perhaps a private writer can attempt at least a few cautious footsteps where the statisticians of Great George Street fear to tread.

The last official estimates of taxes on wages and on salaries were published in the 1952 Blue Book. These gave us figures for 1946 and 1950 (and Cmd. 7933 gives similar estimates for 1938), but while the total tax burden has not been revised, wage-earners have now been re-defined to include shop assistants, who were previously classed as salary-earners.[1] To allow for this change, a small percentage has been added to the previous official estimates of the taxation paid out of wages.[2] The last figures given are for 1951, and somewhat fortunately the total income tax paid in respect of salaries and wages was almost the same in 1951 as in 1954. This allows us to make the working assumption, to be assessed below, that the tax burden was divided in the same way between the two types of income in each of these years. On this basis we would split the figure in Table II for post-tax wages and salaries as follows :—

Type of income	*Amount (£ millions)*				*Percentages of total post-tax personal income*			
	1938	*1946*	*1950*	*1954*	*1938*	*1946*	*1950*	*1954*
Wages	1,864	2,995	4,200	5,706	40	40	44.7	45.1
Salaries and pensions	929	1,481	2,221	3,068	20	20	23.7	24.3
Total	2,793	4,476	6,421	8,774	60	60	68	69

These figures suggest that the slight rise noted for the combined total of wages and salaries after 1950, like the much greater rise from 1938 to 1950, applied to both types of income. However, this has depended on the working assumption that they have each continued to bear the same proportion of their combined income tax since 1951. Now the tax concessions which have been given have particularly affected the middle-income brackets. Consequently, although both wages and salaries have increased, it appears likely that the tax burden on the latter has tended to fall slightly, relative to the former. (Table 28 of the Blue Book gives the incidence of tax on various income groups for 1949, which can be taken as nearly the same as for 1951, and also for 1954). It seems that the assumption made may tend to understate slightly the rise in taxes on wages and thus to overstate slightly the rise in post-tax wages. The share of wages in post-tax income has therefore been approximately constant. The only significant change in the distribution of post-tax income which has occurred since 1950 seems to have been a slight gain by salary-earners at the expense of those with mixed incomes. We can conclude that there was little change in the social composition of disposable money incomes between 1950 and 1954, after a considerable shift towards the working class in the previous twelve years.

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[1] See the 1953 Blue Book, p. 73.

[2] It will be clear that the conclusions are not sensitive to errors in this percentage.

The distribution of real incomes

The last effect to take account of is price movements. In normal times, one might expect all classes to lose (or gain) more or less equally from movements in retail prices, and therefore one would be satisfied to close the analysis at a discussion of the distribution of incomes after tax. But the period under discussion has seen the growth, the limitation, and then the decline, of subsidies on foodstuffs, which play a much greater part in working-class expenditure than in the expenditure of other classes. These movements have, therefore, had a strong effect on the distribution of *real*, as opposed to *money*, incomes.

We have two indices available to indicate the social impact of price movements. One is the interim index of retail prices, which Professor Allen has linked to 1938, covering the purchases of wage-earners. The other is the National Income White Paper index of consumer prices, covering the purchases of all consumers. These do not quite have the same weighting system, but, except for the 1946 figures, it is unlikely that this matters very much.[1] The main difference in treatment (in the pricing of beer) has been removed.

The two series are as follows :

	1938	*1946*	*1950*	*1954*
Index of retail prices (working-class)	100	154	185	232
Index of consumer prices (whole nation)	100	170	206	244

The differences in the behaviour of these two series from 1938 to 1946 and from 1950 to 1954 is too great to be explained wholly by differences in the way the indices are constructed.

From 1938 to 1946, there was a big difference in favour of the working-classes, mainly because of food subsidies. Moreover, since the whole nation includes the working-classes, the cost of living of other sections of the community must have risen by a good deal more than 70 per cent, so that this comparison understates the egalitarian effect of price changes.

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[1] The official series for the interim index uses 1950 weights from January, 1952. Professor Allen has carried this back to 1946 by using these weights on the relatives previously published, and made a 1938 to 1952 link by using the Fisher ' ideal ' formula to average the results obtained by 1937–8 and 1952 weights. (See *Applied Statistics*, June 1952). The consumer prices index is implicitly weighted by the pattern of expenditure in the year concerned, but making 1938 the time base causes rather a hybrid form, since the figure obtained is the result of dividing a Paasche index with 1948 as a time base by a 1938-weighted index with 1948 as the time base. For the former index, the link with pre-war is thus achieved partly with 1938 weights and partly with 1950 weights (which may not have been very different), in the latter case wholly with 1938 weights. The link from 1946 to 1950 uses 1950 weights in the former case, and a mixture of 1946 and 1950 weights in the latter case. (The 1946 weights probably give a smaller weight to the sharp rise in food prices and therefore show a figure slightly too high for 1946, in comparison with the former index.) The link from 1950 to 1954 uses 1950 weights in the former case, and (in effect) largely 1954 weights in the latter case, which may also not be very different. Since this is a rather crucial question for the conclusions, I weighted the price relatives for each commodity group linking 1950 with 1954 by 1950 weights and obtained a rise in the consumer price index of 19 per cent instead of 18½ per cent, showing that the difference in the changes shown by the two indices from 1950 to 1954 cannot be attributed to differences in the year used as a weighting base.

From 1946 to 1950, the two indices moved along parallel paths. From 1950 to 1954, the working-class index went up by 25½ per cent, while the index for the whole nation went up by 18½ per cent, implying a much smaller rise for the middle and upper classes than 18½ per cent. The difference may not be correctly stated by this comparison, because of differences in construction, mentioned above, but the living costs of the working-classes certainly rose by more than those of the rest of the nation. This was partly due to the reduction in food subsidies in 1952 and 1953, but also in part to the fact that food prices in any case rose more sharply than other prices.[1]

Let us now see what the effects of price movements have been. The reader will appreciate from what I have already said that this involves much greater possibilities of error than do the foregoing tables. The price indices are not quite appropriate either in construction or in coverage, for deflating the categories of income I have been discussing. Let us, just for illustrative purposes, divide the main categories of income by the most nearly appropriate indices, to see what answers we get. Once more, we can assess the answer at the end, taking into account the possibility of error. For wages, clearly the best index is the index of retail prices (based on working-class budgets). Salaries, forces pay and social security benefits, however, go to a wide group which can be considered a cross-section economically, and it seems that the most appropriate index for them is the index of consumer prices, which also, of course, is the one used for the total personal income.

TABLE III

The distribution of disposable income in terms of 1938 purchasing power (Illustrative figures)

Type of income	*Amount (£ millions)*				*Percentages*			
	1938	*1946*	*1950*	*1954*	*1938*	*1946*	*1950*	*1954*
Wages	1,865	1,945	2,270	2,460	40	44	50	47
Salaries and pensions	930	870	1,080	1,255	20	20	24	24
Forces pay	65	325	105	130	1	7	2	3
Social security benefits	275	390	360	415	6	9	8	8
Total of employment and social income	3,135	3,530	3,815	4,260	67	80	84	82
Total personal income	4,670	4,410	4,560	5,190	100	100	100	100

If we look at the left-hand side of this table, we see that from 1938 to 1946 the value of ' real ' income from employment and ' real ' social security benefits rose, but the total of real personal income fell. This conclusion we would have reached even if we had used the consumers' price index, or, indeed, any similar index, for deflating all types of income. It does not, therefore, depend on the appropriateness of the indices for various types of income. We can safely conclude that there was *some* fall in the real values of the total of the remaining categories, mixed incomes and property income, and in fact, that it was a large fall. But exactly what it was, we cannot determine.

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[1] A comparison of Blue Book Tables 24 and 25 shows that the ' factor cost ' per unit of food (i.e. excluding taxes and subsidies) rose by 24 per cent from 1950 to 1954, while factor cost per unit of all consumption rose by less than 19 per cent.

From 1946 to 1950, the real value of personal income rose, but not by enough to match the rise of employment and social income, so that the total real value of mixed and property incomes continued to fall, though very much more slowly. Again, the conclusion is not dependent on our choice between the two price indices, although this time the reason is that they showed much the same rise over this period.

From 1950 to 1954, however, the total of personal income apparently rose by more than the total of employment and social incomes, so that the real value of other incomes must have risen. In fact, the total percentage of real personal income received in employment incomes or social security benefits seems to have dropped back. It seems that price movements achieved between 1950 and 1954 a shift in income distribution not noticeable in the distribution of post-tax money incomes. It may well be, however, that the movement of prices over this period did not affect the working-class and the rest of the community as differently as these price indices indicate. If this is so, a comparison of Tables II and III probably rather exaggerates the influence of price movements. Nevertheless, since Table II showed virtually no change in the distribution of disposable income, and since it is certain that the big rise in food prices hit wage-earners harder than others, there must have been *some* decline in the share of real wages, and of total employment and social income, in real personal income. However, any error in the retail prices index over this period is probably upward, and we can safely conclude that the share of real employment and social incomes *in toto* is at least as high as in 1946. Therefore, we can also conclude that economic developments from 1950 to 1954 have not taken the distribution of real income more than a small fraction of the way back to the pre-war distribution.

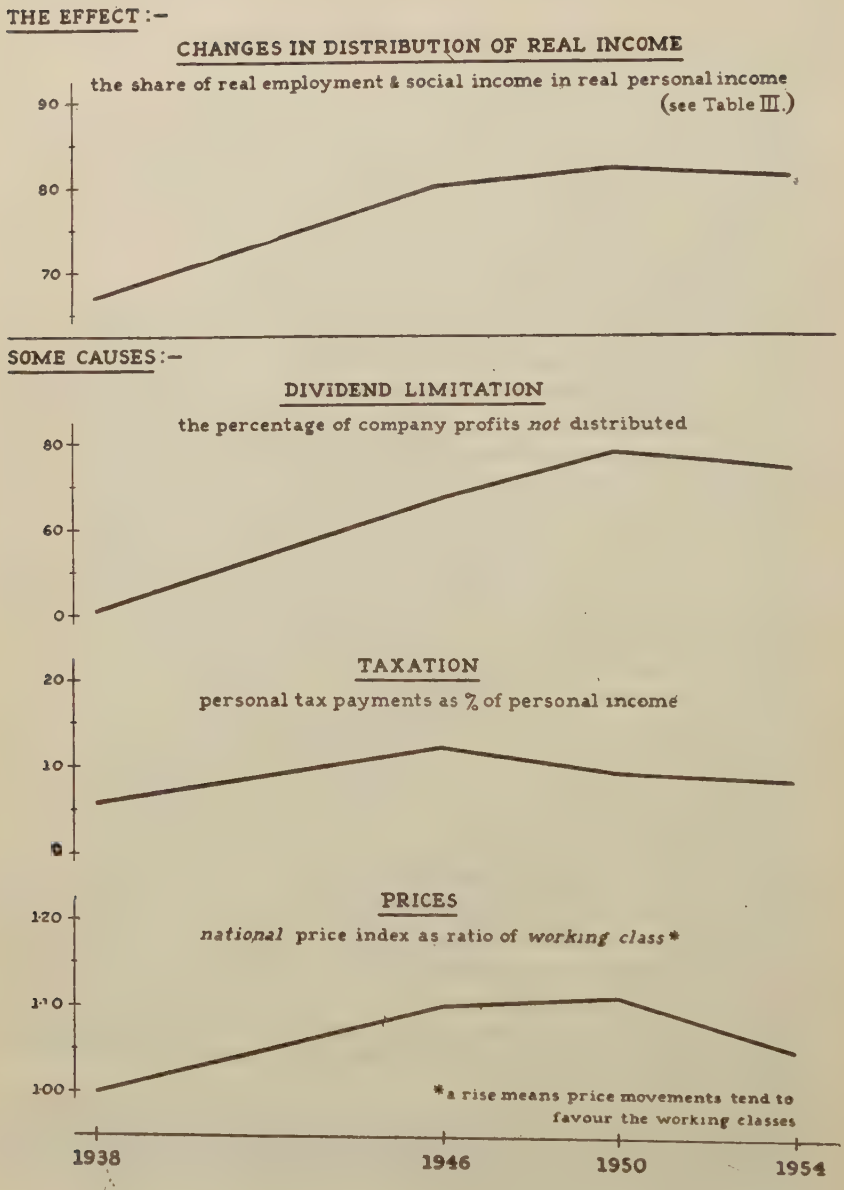
However, this shift back was different from the original levelling tendency in one important respect, which again does not depend on the price indices used. Although up to 1946 the total real value of property and mixed incomes fell, not only relatively but absolutely, after 1950 the shift back took the form, not of a shift of real income away from the wage-earner, but of a slower rise in real wages than in other incomes (particularly property incomes and salaries).

Diagram A shows, at the top, the movement in the share of real personal income taken by employees and pensioners, and below this some of the main factors influencing this, according to the analysis above, are picked out.

Some notes on changes within classes

The distribution of income has been used here in a technical and limited sense, as the share wage-earners (or employees) take of total income. There

DIAGRAM A

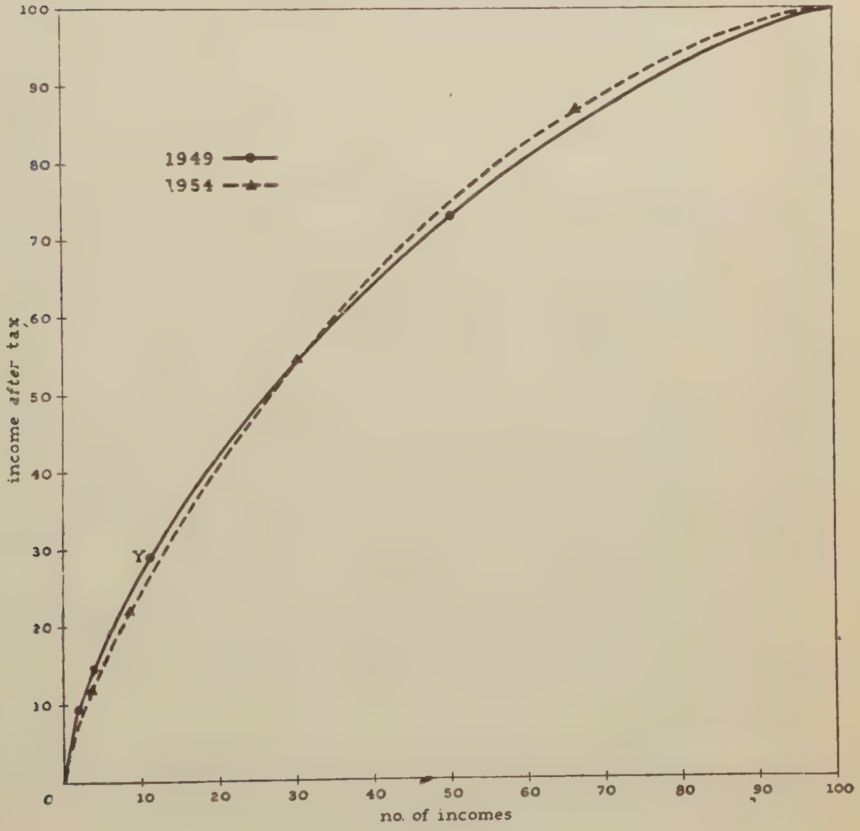

THE EFFECT :–
CHANGES IN DISTRIBUTION OF REAL INCOME
the share of real employment & social income in real personal income (see Table III.)
90
80
70
SOME CAUSES :–
DIVIDEND LIMITATION
the percentage of company profits *not* distributed
80
60
0
TAXATION
personal tax payments as % of personal income
20
10
0
PRICES
national price index as ratio of *working class**
1·20
1·10
1·00
*a rise means price movements tend to favour the working classes
1938
1946
1950
1954

may have been great changes within these large classes. In my previous papers, I showed that there had been tendencies for the real gap between the wages of skilled and unskilled workers to be narrowed, as well as between those of men and women. We lack the detailed figures for continuing this analysis, but there is one general indication.

If we turn the post-tax income distributions for 1949 and 1954 in Table 28 of the Blue Book into cumulative distributions, and express the number of incomes and the amount of incomes as percentages of the total, we get cumulative (Lorenz) curves showing the amount of income going to the top 10 per cent, 20 per cent, etc., of income receivers. These curves are shown together in Diagram B.

By making them in this way comparable, one striking feature emerges—they cut each other, something very rare in inter-temporal comparisons of

DIAGRAM B.



CUMULATIVE PERCENTAGE DISTRIBUTIONS OF INCOME *AFTER* TAX, 1949 & 1954

(Cumulation is from the top:— thus the point Y shows that in 1949 the highest 11% of incomes received 29% of post-tax income.)

Lorenz curves. The intersection occurs at a level corresponding to 30 per cent on the axis of incomes. This means that there was no shift between 1949 and 1954 in the distribution of post-tax income *as between* the top 30 per cent and the bottom 70 per cent of income receivers. Although the definitions of income are not the same, and although the top 30 per cent must include salary earners (even some wage-earners) as well as property-owners, this is roughly compatible with the stability of incomes by source between 1950 and 1954, shown in Table II.[1]

What we can also read here, however, is that *within* the lowest 70 per cent the distribution of income became more unequal, while *within* the top 30 per cent it became more equal. There are some clues to help explain these developments. The earnings and wage-rates indices show that, contrary to the movements up to 1950, men's wages tend to rise a little more rapidly than women's between 1950 and 1954, while the L.C.E.S. wage-rate indices (though limited in coverage) suggest that wage-rates of the skilled now rose about parallel to those of the unskilled—after a tendency for the gap to narrow up to 1950. If we could allow for tax changes, we would presumably get a definite opening of the gaps after 1950 (or 1949), both the gap between male and female wages, and the gap between wages of skilled and unskilled, for income tax hardly affects women or unskilled workers in comparison with skilled workers, who therefore gained relatively more from tax concessions.

Thus, the greater inequality within the poorest 70 per cent shown by the diagram is explicable. However, the diagram shows only money incomes. Even within the bottom 70 per cent, the proportion of income spent on food must be greater for the lowest incomes. Thus, the appropriate indices would show larger increases in the cost of living, the lower one went down the income scale. Consequently, real income would have shifted more in favour of the higher-paid workers than the diagram suggests. However, this shift would still be small compared to the shift in the opposite direction from 1938 to 1950.

The top 30 per cent form such a mixed group that it is difficult to account for greater equality amongst them, which is, in any case, rather surprising, considering we are dealing with incomes after tax. One reason is doubtless the more rapid increase of salaries than of property and mixed incomes, which presumably outweighed the regressive effect of income tax concessions. In this case, on the other hand, price movements may have slightly offset the levelling effect of changes in money incomes.

However, these brief notes do not by any means amount to a comprehensive survey of changes in economic inequality, which would have to take account of changes in incomes of various occupations, between different industries, etc. I have only dealt with changes as between very broad economic categories.

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[1] The basic data for income distributions are not very secure, and not many points are available for drawing the curves. So too much should not be built on them. In particular, a slight shift in one of the points might displace horizontally the point of intersection quite a lot—the figure of 30 per cent is therefore only approximate.

Recent developments

This paper would not be complete if I did not deal with two other points. One is what has been happening since 1954, for the latest information in the Blue Book is already a year old.

I am inclined to think that, when estimates are eventually available for 1955, they will show only a slight further move towards inequality. It is true that the 1955 April Budget was technically regressive, in the sense that it increased the incomes of the higher income groups by relatively more than it increased the incomes of the lower income groups. Those paying no income tax at all, of course, gained nothing,[1] while over half the value of the concessions went to those with 4-figure incomes, increasing their total post-tax incomes by some 5 per cent (with correspondingly higher figures for the top strata).

Yet, the implications of what has been written above is that changes in income tax are of relatively minor importance. The reason is that under present conditions, their effects tend to be swamped by other changes in incomes. For example, the 1955 Budget gave possibly some £50 millions to the middle and upper classes over and above what was necessary to achieve proportionate rises in disposable incomes parallel to what it gave the wage-earners. But the rise in the total of wages (pre-tax) was £440 millions between 1953 and 1954, or about 8 per cent. Judging from the earnings enquiry for April, the increase in the wage-bill from 1954 to 1955 is likely to be some £650 millions, or over 10 per cent.

More important as an influence on the distribution of income after tax has been the continued rise in dividends, which is likely to cause a further large increase, in fact, probably larger than last year's, in distributed property income (helped by a slight thawing of rents and an increase in interest rates). ' Mixed incomes ' will also show the effect of a better harvest and the big increase in retail turnover. Finally, the rise in prices has once more been primarily a rise in food prices, with the tendency, as before, to affect the real incomes of wage-earners more than of other classes, although the rise in earnings has continued to exceed the rise in the interim index of retail prices.

(The autumn budget will have no significant effect on the distribution of real income in 1955, and in any case would not appear likely to have great effects even in 1956, except that the ending of the ' D Scheme ' and the limitation on housing subsidies are further regressive steps.[2])

In brief, all the tendencies of the previous 4-year period have continued, possibly with some acceleration, so that the total effect is likely to have been some further small shift in the distribution of real income away from wage-earners, achieved by faster increases in the other forms of real personal income than real wages, but still leaving the distribution considerably more equal than in 1938, and also more equal than in 1946.

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[1] Unless they were so near paying tax that a wage-rise would have made them eligible this year.

[2] Although the increased tax on distributed profits may check further increases in dividends, it hardly is likely to cause an actual reduction.

The Effect of Capital Gains.

Finally, one major qualification so far as the social interpretation of these conclusions are concerned. I have, up to now, ignored capital gains. The big rise in share prices in 1954 must have had a considerable effect on consumption—it is not likely to have had an important effect in 1950, or in the earlier years. The Actuaries Index of ordinary shares rose from 113 to 152 during 1954,[1] partly, but not wholly, because of dividend increases. How this affects the public, as opposed to industry itself, cannot be said, because the total value of the shares in the hands of the public is not known. But clearly it must have made the public richer by several hundred million pounds ; and since ordinary shareholdings are concentrated almost exclusively in the hands of the higher income groups (ordinary shares are, in fact, the most unequally distributed of all forms of capital), there was a corresponding increase in the assets of these groups.

It is, of course, by no means certain to what extent gamblers consider they can spend capital gains.[2] But it would not, I think, be incorrect to assume that a large fraction is in fact spent. Even long-term gamblers may well have considered this rise overdue and irreversible. If they had found post-war circumstances were rather constricting their consumption, they would be all the more likely to take the opportunity of tax-free relief which fortune had provided, and the automatic increase in collateral for overdrafts would make this quite practical. Some corroboration of this interpretaton is provided by the (admittedly shaky) figures for personal savings. These show a slight decline from 1953 to 1954 despite the continued increase in money incomes and the stability in the prices of consumer durables. To the extent that the rich use capital gains to supplement incomes, there would have been a bigger shift (between 1950 and 1954) towards inequality in *consumption* than there was in *real incomes*.

(There is another item which should be taken into account to complete the picture. From 1938 to 1950, there was a large increase in Government current expenditure on health and education services, etc., which largely, but not entirely, benefitted the families of wage-earners. This did not continue to rise greatly after 1950, and may have fallen relative to national income.)

Summary

The final picture is that there has been, in recent years, a slight regression towards pre-war inequalities in real incomes, both as between the rich and poor, and also within the working class itself. But the emphasis is on the word *slight*.

[1] From the last Tuesday in December 1953 to the last Tuesday in December 1954.

[2] There are those who object to shareholders being called ' gamblers ', urging that their role is to provide capital for industrial advance. Observation of the financial press suggests that its writers assume that readers are more interested in which purchases will make them wealthy, rather than in where the economy needs injections of capital. In any case, the word carries no suggestion of disapproval in the present century, and it draws attention to the very phenomenon being considered here, which may otherwise be overlooked, namely, the tendency of gamblers (in contrast to investors) to spend their winnings.

A ‘HUMAN NEEDS’ DIET: AUTUMN 1955

By T. SCHULZ

The cost of a ‘ human needs ’ diet for a family of 5 persons—husband, wife and 3 children of school age—that will be discussed in this paper, has been computed from data collected between mid-October and mid-November, 1955.[1] The price pattern of the foods included in the dietary from which the figure of total cost derives, was found to be different from that established by means of a similar dietary about 6 months earlier.[2] Many prices had changed ; but these changes revealed no uniform trend. In general, while foods supplying animal protein had become dearer, dry groceries had become cheaper. The net result of these changes, however, was an increase in the total cost of the diet, of a little over 8 per cent, from 63s. per week to 68s. 8½d. (Table I.)

The steepest rise occurred in the prices of pork and bacon, which in the spring months of the year had been remarkably low—boiling bacon and pig's belly then selling for 1s. 6d. a lb. and even less. By the autumn these prices had virtually doubled. On the other hand, cuts of imported boiling beef were still to be had at a low cost, good quality Argentine beef (though bony and somewhat fat) for as little as 10d. a lb. Thus, although a family spending 11s. per week on meat at 2s. 9d. a lb., as shown in Table I, could have obtained only 4 lb. of meat, the same total outlay might have bought over 6½ lb. of Argentine boiling beef, still leaving enough for the purchase of a 2 lb. joint at 2s. 9d. a lb. An outlay of 2s. 9d. a lb. could have secured either a cut of the cheaper kind of roasting meat or good quality minced beef. The inexpensive boiling cuts were, in fact, very much better bargains than the dearer cuts suitable for roasting, for which latter nevertheless demand seemed to be high in all the working-class districts covered by the survey. This preference was bound to be reflected in the relative prices.

The preference shown by many housewives for the more expensive types of food might also provide an explanation for the slight decline that had become evident in the prices of certain low-cost groceries, such as pearl barley, small-grain rice, dried peas and lentils, demand for which appeared to be little affected by small variations in price. A tendency was noticed to replace such foods by partly or ready prepared ones—custard powders, cake and pudding mixtures, ready-to-eat breakfast cereals, tinned foods, etc.[3]

Prices for blends of tea covered a wide range, extending in many shops from about 4s. to 8s. a lb. Teas costing between 4s. and 4s. 8d. a lb. were found to yield strong and quite pleasantly flavoured beverages ; yet they seemed to be in small demand—which may be one of the reasons why they could be obtained by the economically minded. For it was interesting to notice that while low-priced cereals and legumes were freely exhibited in

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[1] In Oxford, London, Birmingham, Reading, High Wycombe, Newbury, and Banbury.

[2] *Cf.* T. Schulz, *A ‘ Human Needs ’ Diet: Spring 1955.* BULLETIN, Vol. 17, No. 2.

[3] Some housewives explained this substitution by the fact that the ‘ fancy ’ goods require little or no preparation and thus gave them time for paid work—or for watching television.

TABLE I

Weekly 'Human Needs' Diet for 5 Persons—Autumn 1955

	Quantity	Average Price per Unit[1]	*Changes since Spring 1955*	
			Quantity	*Outlay*
		s. d.		*s. d.*
(*A*) Bread	19 lb 4 oz.	7½	...	...
Outlay on Group (*A*)		*6 10½*		...
(*B*) Animal Protein Foods :				
Meat	4 lb	2 9	...	*+3 0*
Bacon (boiling)	12 oz.	3 0	*—1 lb 12 oz.*	*—1 6*
Herrings, Kippers, etc. ...	1 lb 8 oz.	1 0	...	...
Eggs	8 eggs	4½	*+ 2 eggs*	*+1 3*
Cheese	1 lb 12 oz.	2 6	...	*+1 5½*
Milk, ordinary	16 pt.	7	...	...
do., condensed skimmed ...	2 tins[2]	10½	*+ 1 tin*	*+ 10½*
School Milk	5 pt.	free	...	...
Outlay on Group (*B*)		*33 2½*		*+5 1*
(*C*) Fats :				
Margarine	2 lb 4 oz.	1 4	...	...
Lard	8 oz.	1 6	*+8oz.*	*+ 9*
Suet and Dripping	8 oz.	1 4	*—1 oz.*	*— 1*
Outlay on group (*C*)		*4 5*		*+ 8*
(*D*)Dried Legumes :				
Lentils	1 lb	8½	*—+ 8 oz.*	*+ 2¼*
Peas	1 lb 8 *oz.*	10½		
Outlay on Group (*D*)		*2 0¼*		*+ 2¼*
(*E*) Other Foods :				
Flour	3 lb	1 5	...	...
Rolled Oats and Oatmeal ...	2 lb 8 oz.	10	...	*+ 5*
Barley	2 oz.	9	*— 2 oz.*	*— 1¾*
Rice	8 oz.	9¼[3]		
Semolina	4 oz.	8		
Macaroni	4 oz.	1 0		
Sugar	*3 lb*	8	*4 oz.*	*— 0½*
Potatoes	21 lb	3	...	*+1 3*
Fresh Vegetables[4]	10 lb 8 oz.	5½	*—3 lb 8 oz.*	*—1 0¼*
Various[5]	...	2 0¾		*+ 1¾[6]*
Outlay on Group (*E*)		*18 6¼*		*+ 7¼*
(*F*) Tea and Condiments :				
Tea	8 oz.	4 4	...	*— 10*
Condiments	...	1 6	...	...
Outlay on Group (*F*)		*3 8*		*— 10*
Total Outlay		**68 8½**		**+5 8½**

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[1] The price unit is : eggs, one egg ; condensed milk, one tin ; fresh milk, pint ; bread 1¾ lb loaf ; flour, 3 lb bag ; 'various' and 'condiments', total outlay ; all other foods, lb.

[2] Equivalent to approximately 3¾ pints of skimmed fresh milk and 11 oz. of sugar.

[3] Small grain rice and ground rice in proportion of 1 : 1.

[4] Carrots, other root vegetables, and greens in proportion of about 1 : 1 : 1.

[5] 4 oz. of cocoa, 8 oz. of dried figs, dates, or stoned raisins, 4 oz. of syrup.

[6] + 4 oz. of syrup.

many shop windows the cheapest brands of tea were nowhere thus advertised, even though they were on sale in many of the shops specializing in the retail of inexpensive groceries.

There was a seasonal increase in the autumn price of eggs, the price of imported preserved eggs having risen to about 4½d. per egg, from 3½d. in the spring of 1955. If in spite of this we have raised the number of eggs in the dietary in Table I, from 6 in the spring to 8 in the autumn, it was done because even at 4½d. an egg was considered a relatively cheap food by most housewives. The nutritional value of an egg in the diet of healthy persons is often overestimated, possibly largely because of its indisputable considerable culinary value. Since bacon had become very dear eggs were frequently bought as a substitute. In our autumn dietary 1½ lb of boiling bacon have been replaced by additions to the quantities in the spring dietary of eggs, fat, and milk. The allowance of boiling bacon in our spring dietary had been exceptionally high because the then relatively low prices of all cuts of bacon had been intended to and, indeed, did stimulate the consumption of bacon.

The reduction in the quantity of fresh vegetables in the autumn dietary is only apparent, as is also the rise in their average price. In the autumn of 1955 carrots, turnips, swedes, onions, green, etc., were generally of a quality noticeably better than in the early months of the year, and the proportion of inevitable wastage was much lower ; consequently, although for these better quality vegetables the price per lb. was higher, their actual cost to the housewife had declined. Potatoes, too, gave less wastage in October/November than old potatoes had done early in the year ; but owing to the small autumn crop their price had risen since then by about 30 per cent. Since wastage of potatoes often results from the way in which they are prepared and served—and in that case may be largely independent of the actual quality of the potatoes—we left the quantity of potatoes in our dietary unchanged ; for this dietary is intended to show what might be bought by an ordinary housewife and not what can be considered sufficient for the exceptionally careful caterer.

The answer to the question, what is the *minimum outlay* that can be assumed to purchase adequate nutrition for a family of specified composition, cannot be found by means of an ideal dietary providing for the essential nutritional requirements at a *minimum cost.* The problem posed can be approached realistically only with reference to the—fluctuating—prices of inexpensive foods to which the families are likely to be accustomed and among which a housewife may be expected to choose intelligently so as to profit by variations in prices, without, however, having to resort to experimental purchases or experimental meals. The dietary in Table I lists the ingredients for simple but perfectly ordinary meals, and the prices—by no means always the lowest ascertained by us—were selected so that in all the places covered by our survey the total diet could be purchased with reasonable but not exceptional care at an outlay of 68s 8½d. Although it was often possible to buy the one or the other food at a price lower than stated in Table I, it appeared unlikely that a majority of poor housewives would actually have managed to procure the whole diet or—in practice more likely—its equivalent at substantially less than the total cost computed by us.

That the dietary in Table I does not represent adequate nutrition at the lowest possible cost is brought out unmistakably in the figures of Tables II and III, which should be considered in conjunction. Table II shows the relative amounts of calories, protein, calcium, and iron, that could be obtained for an outlay of 6d. on each of the several foods listed and priced in Table I. The bases of these indices are the corresponding nutritional values represented by 6d. worth of bread, each of which values has been equated to 100. Since we intended to use bread as our measuring rod we placed this—the

TABLE II

Nutrients Obtained for a Fixed Outlay

	Obtained for 6d. Outlay			
	Calories	Protein	Calcium	Iron
Bread	1590	54 gm.	672 mgm.	11 mgm.
do., as % of Weekly 'Human Needs' Diet for 5 Persons ...	2.0%	2.1%	1.8%	2.4%

Index of Nutrients Obtained for a Fixed Outlay

	Calories	Protein	Calcium	Iron
(*A*) Bread (*Base of Indices*) ...	100	100	100	100
(*B*) Animal Protein Foods :				
Meat	12	23	1	23
Bacon	22	11	1	7
Herrings, etc.	15	45	21	21
Eggs	7	15	5	15
Cheese	24	42	110	6
Milk, ordinary	18	29	87	5
do., condensed skimmed ...	37	40	112	6
(*C*) Fats :				
Margarine	82	—	1	5
Lard	85	—	—	—
Suet and Dripping	95	—	—	–
(*D*) Dried Legumes :				
Lentils	58	143	18	222
Peas	49	119	23	106
(*E*) Other Main Foods :				
Flour	105	104	103	106
Rolled Oats or Oatmeal ...	67	61	23	103
Barley	65	44	5	19
Rice	65	17	1	9
Semolina	72	67	9	33
Macaroni	48	44	8	29
Sugar	81	—	—	—
Potatoes	32	24	10	29
Fresh Vegetables	5	10	29	16
All Foods in Diet[1] *excluding* School Milk, Tea, and Condiments	38	36	41	33

[1] Including jam, syrup, dried fruit, cocoa.

TABLE III

‘Human Needs’ Diet for 5 Persons excluding School Milk, Tea, and Condiments

	Outlay %	Calories %	Protein %	Calcium %	Iron %
(*A*) Bread	10.6	27.7	29.1	25.6	32.3
(*B*) Animal Protein Foods:					
Meat	16.9	5.3	10.6	0.5	12.1
Bacon	3.5	2.0	1.0	0.1	0.7
Herrings, etc.	2.3	0.9	2.8	1.2	1.5
Eggs	4.6	0.8	2.0	0.6	2.2
Cheese	6.7	4.1	7.8	17.8	1.2
Milk, ordinary	14.3	6.9	11.3	30.2	2.0
do., condensed skimmed ...	2.7	2.6	3.0	7.3	0.5
(*C*) Fats:					
Margarine	4.6	9.9	—	0.1	0.8
Lard	1.2	2.6	—	—	—
Suet and Dripping ...	1.0	2.6	—	—	—
(*D*) Dried Legumes:					
Lentils	1.1	1.7	4.3	0.5	7.4
Peas	2.0	2.6	6.6	1.1	6.5
(*E*) Other Foods:					
Flour	2.2	6.0	6.2	5.5	7.0
Rolled Oats or Oatmeal ...	3.2	5.6	5.4	1.8	10.1
Barley	0.1	0.2	0.2	—	0.1
Rice[1]	0.6	1.0	0.3	—	0.2
Semolina	0.2	0.5	0.5	0.1	0.2
Macaroni	0.4	0.5	0.5		0.3
Sugar...	3.1	6.6	—	—	
Potatoes	8.1	6.8	5.3	1.9	7.1
Fresh Vegetables	7.4	1.1	2.0	5.1	3.5
Various[2]	3.2	2.0	1.1	0.6	4.3
All Foods in Diet *excluding* School Milk, Tea and Condiments	100.0	100.0	100.0	100.0	100.0
School Milk	—	2.2	3.6	9.4	0.6
Tea and Condiments	5.6	—	—	—	

[1] Small grain rice and ground rice in proportion of 1 : 1.

[2] Jam, Syrup, dried fruit, cocoa.

main carbohydrate food in most low-cost dietaries—in a category of its own.

Bread and flour—both calcium reinforced—stand out in Table II as the cheapest and best balanced foodstuffs of the dietary.[1] Cheese and milk, however, provided more calcium for a given outlay, and dried peas and lentils more protein. Of the animal protein foods, herrings—fresh and cured, cheese, and skimmed milk, were in terms of protein only about half as expensive as meat and only a third as expensive as eggs.

Table III compares the figures of relative outlay based on the data in Table I with the corresponding relative amounts of nutrients derived from the quantities purchased. Obviously, if a family consumed mainly the cheapest cuts of boiling meat instead of the more expensive cuts, allowed for in our dietary, the nutritional values for meat in Tables II and III could be substantially higher, and such replacement would result in a reduced figure of the total cost of the amounts of nutrients to be provided by the dietary. But a reduction in cost without a significant alteration in the nutritional content of the diet could also be attained if the total quantity of meat in the diet were reduced and the quantities of the cheaper animal protein foods—herrings, cheese, and skimmed condensed milk—increased in compensation. Only cheese and/or milk can be considered nutritionally indispensable items in the group of animal protein foods.

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[1] Providing for an outlay of 6d. about 2% of each of the nutrients shown in the Table.

The main source of vitamin A in the diet would be margarine and the main source of its pro-vitamine carotene the fresh vegetables, especially carrots, of which we have assumed a weekly consumption of about 3½ lb. This narrow range of foods would account for four-fifths—and possibly more—of the total effective intake of vitamin A, or vitamin A equivalent, from the diet. In addition to these foods, only cheese and milk are of some importance as suppliers of this vitamin (Table IV).

TABLE IV

Vitamin A Content of 'Human Needs' Diet

	%
Fresh Vegetables[1]	63[2]
Margarine	17
Cheese	8
Fresh Milk, bought	8
Eggs	2
Other Foods	2
Total Diet *excluding* School Milk	100
School Milk	2½

[1] Carrots, other root vegetables (*excluding* potatoes), and greens, in proportion of about 1 : 1 : 1.

[2] Carotene ÷ 3.

The B group of vitamins is widely distributed and any mixed diet is likely to yield a generous intake, provided that sugar—in its basic form or in food preparations—is not consumed on a very large scale in preference to the farinacious foods and potatoes.

The range of foods that are essential for the supply of vitamin C is even narrower than that essential for the supply of vitamin A. Vitamin C is very unstable and the content of vitamin C of specific foods can vary enormously, in consequence of what may seem slight variations in type, in freshness, or in preparation and serving. The heating up of food or even the mashing of potatoes can destroy a very large proportion of it. However, assuming a not over-conservative preparation of vegetables and potatoes, and allowing for a fair margin of error, the dietary would be nutritionally satisfactory also in this respect. Something like nine-tenths of the total available content of vitamin C in the diet would be derived from potatoes, greens, and swedes, while the remaining 9 or 10 per cent would be obtained from fresh milk. Additional vitamin C could be obtained if the dried peas were allowed to sprout before cooking.

Figures of nutritional intake with reference to a dietary such as set out in Table I can only be broad approximations. Only an analysis of foods actually dished up and eaten by each individual can yield precise data. Nevertheless, so long as the country was faced with food shortages and food rationing, it was considered useful to work out exact figures of nutrients provided by the ' human needs ' diet because such figures—though in themselves only hypothetical—provided us with a means of assessing changes in the availability of essential nutrients as determined by changes in the availability of specific foods. But these were abnormal times. Under more normal conditions, a ' human needs ' dietary must be compiled so as to guarantee a stable nutritional intake, though there will be changes in its composition in response to changes in the price structure of the foods that compose it, such as can be assumed to be made by an economical housewife. However, a ' stable ' nutritional intake can be defined in relation to the several nutrients only within ranges and not by means of precise single data. Except in those instances of artificial addition of nutrients to certain foods—vitamins A and D to margarine, calcium to bread and flour—nutrients supplied by specific foods are not and never can be standardized, and the nutritional intake from any diet, whether a ' human needs ' or a luxury one, can only be ' stabilized ' within fairly wide—and elastic—limits. It is, indeed, virtually impossible, and quite unnecessary, for a person leading a normal life to obtain a perfectly balanced diet every day, though it is of course necessary that a sufficiency of essential nutrients be obtained over a reasonable period of time.

This sufficiency, with margins to spare, would be secured by the dietary outlined in Table I. The requirements of the family to which the dietary refers, of the most important nutrients, are given in Table V. With respect to the intake of calcium, the requirements can be assumed to be covered ; in the case of the other nutrients, they would be surpassed

TABLE V

Nutritional Standards Applied to ' Human Needs ' Diet

	MAE[1] Values of Family	Requirements per MAE per day
Calories	3.73	3,000
Protein	4.43	70 gm.
Calcium	7.13	0.8 gm.
Iron	5.40	10 mgm.
Vitamin A	5.00	3000 I.U.
Vitamin B_1	4.68	0.90 mgm.
Vitamin C	5.00	30 mgm.

[1] Male Adult Equivalent.

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